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The Rural Inpatient Behavioral Health Delivery System's Challenges to Access

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This is to certify that the doctoral study by

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Walden University
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Abstract

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Doctor of Healthcare Administration

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Abstract

Readmissions occurring in rural areas are an operational problem for administrators of state-owned facilities. The number of state-owned psychiatric beds have decreased by more than 96% nationwide. Georgia has 954 state-owned psychiatric beds (9.3 beds per 100,000 people) and ranks 48th in the United States. This is important as health administrators must ensure quality care for patients. The purpose of this study was to understand the relationship between readmission rate, discharge disposition, and rural access for patients who were admitted to an inpatient state-owned behavioral health center with a diagnosis indicating the patient is seriously mentally ill. The theoretical framework for this study was built on Avedis Donabedian's structure, process, and outcome model. Hypotheses were tested using binary logistic regression analysis. Discharge disposition was the strongest predictor of state-owned inpatient behavioral health readmissions for high-risk behavioral health patients. Using a comprehensive discharge planning protocol could help prevent readmissions. This study contributes to positive social change as it could improve overall patient quality of life and care and reduce healthcare expenditures. Hospital administrators may draft a better discharge disposition planning process that focuses on finding stable safe healthy housing, as well as influence modernized institutionalization.

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Dedication

I dedicate the entirety of this doctoral dissertation work to my daughter Shania Alexandria Fluellen, the brightest light of my life. Every ounce of strength, hope, and resilience came from her as my inspiration and infinite love. To my father, Bourbon (Willie) Ethel Williams, from the breath and loins of my soul came a spiritual influence that only you can command; I thank you for giving me the spiritual guidance and protection I needed to carry me on. My dearest mother, Catherine Olivia Whittington-Williams, you will never know the depths of my love for you; giving me life is the best gift of all; your spirit has been a shield that has moved me in every direction of my existence, and I thank you for that. I am also dedicating this doctoral dissertation to my brother Dwaine Ethel Williams, my sister Mildred Dorothy Tate, and my brother-in-law George O. Tate; you all have taken part in sustaining me through the bad and ugly of life; knowing that you were always there at some point in my life to lift me up when I have fallen meant the world to me. I want to thank the Humphrey family for loving me as their own; people will come into your life for a reason, season, or a lifetime; through every obstacle, you remained true and present. Harriet Davis, without the predestined imposition of our friendship, there is no doubt that you engender hope, ingenuity, and wisdom, restoring my faith in humanity solely because of your authentic self. My life would never be possible without the blessings and purpose of the Lord; therefore, last but never least, I dedicate my life to God and his son Jesus Christ. Each of these ingredients is responsible for cultivating who I am today, a woman of integrity, self-worth, and endless wisdom.

Acknowledgments

The behavioral healthcare business, and those professionals within the discipline, aspirer to improve the effects of mental illness and addictive disorders on individuals and the represented population. While enduring more than 22 years of employment at what was once known as the largest psychiatric institution in the world, Central State Hospital (CSH), founded in 1842 (Cranford, 1981; Thompson, 2007) and Georgia Regional Hospital at Savannah, a conscious of social change ensued; provoking further research and understanding about behavioral health.

Milledgeville is located deep in the south, a quaint small town in rural Middle Georgia that housed this grandiose psychiatric government-run institution, which cared for people of all ethnicities across every corner of the world. This brief paradigm evolved into an unforgettable introduction to a new experience that inspired the need for new knowledge in behavioral health within a more modernized society. Respectively, thanks go to CSH, formerly known as the state lunatic, idiot, and epileptic asylum. I want to thank the visionaries for what was once remembered as the world's largest historical insane asylum, showing unconditional love and compassion for the often forgotten and neglected vulnerable population, those with mental illness, intellectually and developmentally disabled, as well as individuals with addictive diseases. Unequivocally, my Dissertation Chair Dr. Matt Frederiksen-England must be honored and thanked for his relentless dedication to the job of coaching, mentoring, and guidance during this final stage of my academic journey; his tactful influence created a continuous infusion of supplemental self-esteem and confidence, which propelled me even further. Also, I would

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Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study and Literature Review

The topic of this study, readmissions of state-owned inpatient behavioral health high-risk patients, measures the relationships between discharge disposition and rural access after controlling for Length of Stay (LOS) and diagnosis. This study is needed because patient readmissions are detrimental to state-owned inpatient behavioral health hospitals' success and growth, which is a significant problem for psychiatric patients (Hughes et al., 2019; Shomate, 2018). Medical treatment costs increase with each residual admission, exacerbating the existing budgetary restraints acquired by state-owned psychiatric hospitals, leading to quality concerns, underlying operational issues, and patient safety risks. Potential social change includes a comprehensive discharge disposition process and proper next-level access to care, designed for severely mentally ill (SMI) patients. Hospital administrators may construct quality improvement methods, practices, procedures, processes, and policies to ensure that SMI patients will acquire adequate treatment and medical care, alternative interventions, and support (Graves, 2020). This study's results may help address the recovery needs of high-risk behavioral health patients and bring awareness to those contributing factors related to the determinants of the appropriate discharge site and next level of care in rural areas.

Section 1 contains the study topic and background information on state-owned inpatient behavioral health high-risk patients, discharge disposition, rural access, and readmission rates. The problem statement, purpose, research question, and hypotheses follow. The conclusion consists of the theoretical foundation, the significance of the

problem, the nature of the study, the definitions, assumptions, limitations, scope, delimitations, and a section summary.

Background

State-owned psychiatric institutions gained prominence within the United States public mental health delivery system in 1955 when the population topped half a million, dropping from 559,000 to 107,000 in 1988 due to depopulating long-term chronically ill patients, defined as deinstitutionalization (LeePow, 2015). The deinstitutionalization movement, which use to serve the purpose of protecting and providing shelter (Cranford, 1981), proposed the closure of state-owned psychiatric hospitals, placing individuals with SMI and developmental disabilities into communities within the least restrictive environment, leading to a 95% decrease in the state hospital population countrywide, changing the inpatient delivery system statewide (Estroff, 1981; Fisher et al., 2009; Fuller, 1997; Simmons, 2017). Studies within the literature suggest that those state-owned inpatient behavioral health hospitals that remained open experience higher readmission rates, provide ultra-short stays, higher treatment cost, quality of care concerns, and a lack of comprehensive transition to care models; the problem is that SMI individuals are being recycled through the system despite the popularity of community-based outpatient facilities (Cherry et al., 2017; Holdsworth et al., 2015; Kalseth et al., 2016; Pincus, 2015).

The rural state-owned inpatient behavioral healthcare delivery system failed to acknowledge that service utilization and access for high-risk individuals (i.e., mental illness [schizophrenia, schizoaffective disorders, bipolar, major depressive disorders, etc.]

and substance abuse) with extensive, heterogeneous needs require various treatment plans and care management services that benefit specific kinds of high-risk individuals more so than others; there is no one-size-fits-all approach (Hayes et al., 2016; Smeets et al., 2020). Proper comprehensive aftercare services involve value-based next-level access to care for high-risk individuals, which depends on a structured and customized discharge disposition plan (Jun et al., 2017; Simmons, 2017). A gap in knowledge exists in understanding the correlation between readmissions and the discharge disposition as it relates to state-owned inpatient behavioral health patients in rural areas. The need for this study is prevalent for the long-term recovery of high-risk behavioral health patients post-discharge from an inpatient behavioral health hospital to decrease readmissions and bring awareness to those internal and external determinants that prevents an adequate discharge disposition and next level access to care in rural areas. New knowledge in the field of behavioral health provokes better policy decisions on the need for such services for SMI patients in rural areas (Hughes et al., 2019; Purtle et al., 2018; Safran et al., 2011).

Problem Statement

State psychiatric hospitals were depopulated, displacing SMI patients into community-based outpatient programs due to the deinstitutionalization law (Georgia Department of Community Health, 2020; U.S. Department of Justice, 2020). The urgency of the deinstitutionalization movement caused these facilities to discharge SMI patients without a structured discharge disposition process, using no pre-discharge or bridging interventions (Alper et al., 2022). The operational problem for administrators in rural state-owned inpatient behavioral health hospitals is readmissions of high-risk behavioral

health patients due to a lack of adequate discharge disposition (Cheng et al., 2017; Graves, 2020; O'Malley et al., 2017). The cost of readmissions negatively affects the hospital''s economic health and reduces healthcare resources (Sievers & Larson, 2020). Rehospitalizations in state-owned inpatient behavioral health hospitals for SMI patients, such as schizophrenia and mood disorder, are pricey. Admissions for SMI and chemically dependent patients are more than double the cost of conventional medical admissions; when patients are readmitted for the same condition multiple times, the price may triple depending on the diagnosis (Ortiz, 2019; Reif et al., 2017; Sievers & Larson, 2020).

Readmissions can create an imbalance in the staff-to-patient ratio; when providers are not accessible due to overcrowding, there is a higher risk of violence and suicide among behavioral health patients (Akerele et al., 2017; Kalseth et al., 2016). Geographical characteristics, such as the population and service area may not provide proper continuity of care, which affects the discharge disposition and next-level access to care in rural areas (Akerele et al., 2017; Kalseth et al., 2016).

The depopulation of state-run behavioral health institutions relocated SMI patients to federally financed community mental health facilities through processes that were both proximal and distal to hospital administration (Amadeo, 2018; 2021; Lee Pow, 2015). State psychiatric beds have decreased by more than 96% nationwide (Sievers & Larson, 2020). The State of Georgia has 954 psychiatric beds, equal to 9.3 beds per 100,000 people. The State of Georgia ranks 48th out of the 50 states to access mental health providers and 43rd in mental health services (National Alliance on Mental Illness [NAMI], 2020). Recent scholars have proclaimed that a well-defined and collaborative

discharge disposition process plays a critical role in decreasing readmission risks, determining the appropriate next site of care and evaluation of interventions may reduce the possibility of unexpected readmissions and adverse events after discharge (Akerele et al., 2017; Alper, 2022; Cheng et al., 2017; Graves, 2020; Kalseth et al., 2016).

Acknowledging the risk stratification and discharge needs of SMI patients and the capabilities of the receiving facility to manage those needs, play a vital role in the patient's health, and readmission prevention. Effective discharge planning processes can set the patients up for success, otherwise, the community-based outpatient facilities cannot handle high-risk behavioral health patients with SMI (Georgia Department of Community Health, 2020). The high-risk status of behavioral health individuals, who may be a danger to themselves and others, and the functional recovery needed to remain an outpatient goes unnoticed; thus, the risk of inpatient behavioral health readmissions may only get reduced on the surface (AHRQ, 2014).

A gap exists in the research involving frequent readmissions among high-risk behavioral health patients in state hospitals regarding the discharge disposition planning process (Glick et al., 2011; Shomate, 2018; Steeves, 2018). Filling this gap in the research may help uncover the cause, such as insufficient hospital care quality or functional coordination, of discharge disposition processes and post-discharge care (Ballester, 2017; Germack et al., 2019; Reif et al., 2017).

The data analysis from this study may help health administrators address readmission problems, create a comprehensive discharge disposition process to accommodate high-risk patients who discharge without a proper aftercare plan in rural

areas, and open additional modernized long-term inpatient behavioral health facilities for high-risk patients, opposed to ultrashort stays for all behavioral healthcare levels.

Purpose of the Study

The purpose of this quantitative correlational research is to determine to what extent, if any, a correlation exists between the independent variables discharge disposition, rural access, and the dependent variable readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

In state-owned behavioral health hospitals, discharging patients is complex compared to conventional medical hospitals related to hospital readmissions (Schreiber, 2020). Preventing avoidable readmissions can improve a high-risk SMI patient's life in a quality way and the financial success of health care systems (Alper, 2022). This study's intent is to bring awareness to psychiatric hospital administrators to establish preventive measures such as pre-discharge interventions, post-discharge interventions, bridging interventions, and quality improvement initiatives to reduce readmissions of state-owned inpatient behavioral health high-risk patients in rural areas. Revising or implementing a comprehensive discharge disposition process designed for SMI patients with heterogeneous needs, ensures next-level access to care by integrating hospital and community-based outpatient services in rural areas (Silow-Carroll et al., 2020).

Research Question and Hypotheses

RQ: To what extent, if any, is there a correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis?

H_0: There is no correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

H_a: There is a correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

Theoretical Framework

The theoretical framework for this study is built on Avedis Donabedian's structure, process, and outcome model. Donabedian was one of the first to recognize the significance between the association of structure, process, and outcome pertaining to total quality management within the healthcare industry (Donabedian, 1980,1981,1988). Structure as it relates to this study refers to the state-owned inpatient behavioral health hospital, the organization and environment in which the health service organization (HSO) operates (Donabedian, 2005). Structure also includes equipment, supplies, education, credentials and experience of the professionals, the financial and administrative measures by which the HSO is capable to provide care (Donabedian, 1988, 2005; Kunkel et al., 2007). The process is the current actions of the patient, practitioner, and hospital administrator to ensure the delivery of proper and adequate care.

Implementing a comprehensive discharge disposition process and next level of access to care as it relates to this study falls within the parameters of this process domain. Evaluating the success of the process of care involves factors such as proof of preventative management, transition, coordination, and continuity of care practices (Donabedian, 2005; Kunkel et al., 2007). Process also includes patient-centered care, the acceptance of the patient in receiving care and the provider and physician's job in prescribing treatment (Donabedian, 1988; Kunkel et al., 2007). The outcome is the utilization, improvement, or lack of services regarding patients' health status upon treatment, whether successful or failed. Outcome entails the survival, functionality, and literacy of the patient's health (Donabedian, 1988, 2005; Kunkel et al., 2007). In the study, Donabedian's concept of outcomes is the 30-day hospital readmission rates from state-owned inpatient behavioral health hospitals by high-risk behavioral health patients. Readmissions is an outcome of a patient's failed treatment or continuum of care services (Donabedian, 1988). The outcome denotes the patient's quality of care and quality of life. Donabedian's approach originated from his experience as a physician focusing on quality improvement processes designed to standardize care caused by variances in the populations of patients, healthcare providers and administrators (Kobayashi et al., 2011).

Nature of the Study

The nature of this study was quantitative non-experimental research using a correlation design to test the correlation between the predictor variables (i.e., independent) discharge disposition and rural access to the outcome variable (i.e., dependent) readmissions status amongst state-owned inpatient behavioral health high-risk

patients, after controlling for LOS and diagnosis. The retrieval of secondary data comes from Healthcare Cost and Utilization Project (HCUP) because it contains relevant data on the independent and dependent variables. Permission for accessing the archival data is required in compliance of the following process: The National Readmission Database (NRD) for data year 2018 was purchased online though the HCUP Central Distributor after proper registration to the website was complete. The HCUP Central Distributor is the entity that accepts, processes, and fulfills applications for the purchase and use of HCUP databases. I have completed the online HCUP Data Use Agreement Training, read, signed, and received the certificate of completion (i.e., HCUP-368H64FYV) for Nationwide Databases (PDF file, 260 KB: HTML). A correlational design has been chosen for this study to ascertain the strength of the relationship between the independent and dependent variables as measured and determined by correlation coefficients. A descriptive analysis to identify the data set variables for this study was used, which is discharge-level data. The A priori power analysis in the G*Power software was used to input a medium effect size, alpha level of .05, and power level of 0.80 to obtain a total sample size of (3070) state-owned inpatient behavioral health high-risk patients.

Research Search Strategy

The literature review search process includes the retrieval, assessment, and interpretation of acceptable scholarly journals, peer-reviewed articles, seminal research, books, and dissertations related to the behavioral healthcare delivery system, state-owned inpatient behavioral health patients, discharge disposition, rural access, and readmission rates; described here. The keywords searched were *behavioral healthcare delivery*

systems, Georgia inpatient behavioral health beds for high-risk patients, Georgia inpatient behavioral health high-risk patients, increase readmissions, readmission rates, discharge disposition, discharge status, discharge planning, discharge disposition planning process, transitional care models, coordination of care, access to care, next-level access to care, rural access, quality, mental illness, severe mental illness, serious mental illness, high-risk population, psychiatric healthcare, substance abuse, deinstitutionalization, trans-institutionalization, state-owned inpatient psychiatric hospitals, asylum, and *rehospitalization* in the Walden University journal database, EBSCO, ProQuest, PubMed, BioMed Central, Google Scholar, as well as Thoreau multi-database search. To display historical literature relevant to this study, the years of research occurred from the early 18th century.

Literature Review

This chapter includes information concerning the history and assessment of state-owned inpatient behavioral health services that provides essential background to the current study. Helmicki (2017) dated the emergence of government-owned inpatient behavioral health hospitals in the United States to as early as the 1700s, noting that the roles and functions of these institutions changed over time. Fisher et al. (2009) stated that for many years, the mental health policy became more of the focus, proposing the closure of these hospitals, leading to a 95% decrease in the state hospital population countrywide, changing the inpatient delivery system statewide (Mulvey & Schubert, 2016).

In the State of Georgia, the provision of inpatient behavioral health services and beds for high-risk patients began to decline in the mid-2000s due to many factors (e.g.,

state budget cuts, sentinel events, deinstitutionalization laws, increases in community-based programs, and low employee retention rates for skilled psychiatric professionals), Department of Justice (2009). The inpatient behavioral health facilities that remain open in the state confront multiple challenges, such as increased readmission rates, inadequate discharge disposition processes, higher treatment costs, quality of care concerns, and a lack of comprehensive transition-to-care models; improper next-level access to care (Department of Justice, 2009). As a result of these problems, high-risk (e.g., SMl) individuals may be recycled through the system, despite the availability of community-based outpatient facilities (Cherry et al., 2017; Holdsworth et al., 2015; Kalseth et al., 2016; Pincus, 2015; Sylvestre et al., 2017). For high-risk patients with severe mental disorders such as schizophrenia, the hospital readmission rate exceeds 20% (Sisti et al., 2015).

Recognizing these issues, Sisti et al., (2015) advocated for more cost-effective healthcare for high-risk or SMI patients. Prisons, Sisti contended, became the new institutions following the closure of state psychiatric hospitals, termed transinsitutionalization. Although assisted community treatment can be a viable option for high-risk patients, Sisti explained that current community-based mental health outpatient programs are a poor fit for many seriously ill patients. These programs fail to administer adequate services to enough patients with severe mental health disorders. Further, the block grants used to fund community behavioral health services lack transparency in distributing service requirements for high-risk patients (Jaffe, 2017; Sisti et al., 2015).

The following contains a brief history of state-owned inpatient behavioral health patients and an introduction to the behavioral health delivery system. Next, presented is a summary of principles that may reduce readmissions within state-owned inpatient behavioral health hospitals or institutions for high-risk patients, the need for an adequate comprehensive discharge plan and disposition process. Further literature review includes the barriers to next-level access to care regarding post-discharge planning for high-risk inpatient behavioral health patients in rural areas, denoting a national concern. In summary, the review presents existing knowledge from studies concerning increased readmission rates in psychiatric inpatient hospitals or institutions from a non-clinical perspective, exploring the effects of an adequate or improper discharge disposition for high-risk patients regarding next-level access to care within community-based programs.

History of State-Owned Inpatient Behavioral Health Patients

State-owned inpatient behavioral health hospitals constitute a fraction of the healthcare delivery system serving people with mental illness, addictive diseases, and developmental disabilities in rural areas such as Georgia (Marrill, 2019; Verulava & Sibashvili, 2015). Behavioral health hospitals, known historically as *almshouses, insane asylums, sanctuaries, madhouses,* or *mental hospitals,* have undergone significant changes over time (Cranford, 1981). Beginning with an inpatient model based on philanthropy, these institutions were reshaped by various reforms, with a deinstitutionalization approach to care becoming dominant in recent decades due to factors such as the 1999 U.S. Supreme Court decision in *Olmstead v. L.C*. (Yohanan, 2013). This gradual movement also reflected the establishment of various individual

rights under state law (e.g., patients' fundamental rights and liberties, the right to treatment [*Rouse v. Cameron* and *Wyatt v. Stickney*], and the Civil Rights of Institutionalized Persons Act; Appelbaum & Gutheil, 1991).

The evolution of behavioral health treatment facilities may be traced to the 18th century when a new understanding of mental health developed. A German physician, Emil Kraepelin, introduced mental health as a distinct medical model in the 1800s. This acknowledgment provoked further work informed by a pioneer humanitarian reformer named Phillippe Pinel, a French psychiatrist and physician who advocated for the moral treatment of individuals with mental illnesses in the late 1700s (Talbott & Hales, 2001). Pinel's scientific theories of mental illness contradicted the myth that mental illness symbolizes demonic possession, providing evidence that mental disorders originate from various factors, including psychological damage, injury or social stress, heredity, and congenital conditions (Charland, 2018; Sushma & Tavaragi, 2016). The more people understood mental health as a medical model, the more respect the mental health discipline gained. Therefore, this new outlook influenced others to stand up and advocate for people with mental health disorders.

In 1840, schoolteacher and asylum reformer Dorothea Dix established a benevolent movement dedicated to caring for persons with mental illness, acknowledging a need to abolish the stigma and punishment associated with mental illness. The 1854 Land-Grant Bill for Insane Persons, a national policy informed by Dix, proposed that federal lands be preserved for the construction of asylums countrywide, leading to the creation of 32 psychiatric facilities in 18 states, manifesting the largest public psychiatric

hospitals in the world, established mainly in rural areas due to the enormous size of the institutions (Parks & Radke, 2014).

A stunt journalist, Nellie Bly, a.k.a. Elizabeth Cochran, born in 1864; known for her investigative work at New York's Blackwell's Island Women's Asylum for going undercover in 1887 to expose the asylum for allegations of abuse and mistreatment (Bly, 2015; Parham, 2010). Cochran challenged the behavioral healthcare delivery system by posing as a patient to check the well-being of needy mentally ill women, declared insane by a group of mental health professionals, she embarked on the first day of her journey that became an echo of the remaining nine days of her incarceration. Cochran proclaimed that the asylums generate the insanity they are supposed to treat (Bly, 2015; Winchester, 2016). The nurses who caused despair were the same nurses responsible for the patient's safety and well-being. Their actions have shown no regard for this population of people; treating them as inhuman; discarded by their families to be stored away not to disrupt the convenience and happiness of the sane (Bly, 2015; Parham, 2010; Winchester, 2016). Upon Cochran's discharge, she published an article in The New York World regarding the asylum's dire conditions and harsh treatment. The publication gained notoriety and captured the attention of the New York grand jury and state representatives (Bly, 2015; Parham, 2010; Winchester, 2016). The Department of Public Charities and Corrections awarded more than $800,000, part of the budget for asylum reform. In addition, significant changes ensued, and the population of people admitted dropped to include only SMI patients (Baker et al., 2019; Bly, 2015; Parham, 2010; Winchester, 2016).

Cochran's story became infectious, provoking similar reform efforts countrywide, even inspiring mentally ill patients to speak up and act.

Clifford Whittingham Beers (1876-1943), a Yale graduate and founder of the mental hygiene movement, released a book entitled "A Mind That Found Itself," characterizing asylum life as cruel and barbaric from the perspective of an institutionalized man. Beers voluntarily committed himself into the Butler psychiatric hospital in Providence, Rhode Island, living most of his life battling a hereditary mental disorder like his family (Parry, 2010). Two of Beer's brothers committed suicide in state mental health hospitals, and one died as a teenager from seizures while the youngest was in infancy. Beers made a considerable contribution to the discipline of psychiatry, fighting to improve standards while working to reform treatment for patients with mental illness. Between 1908-1913 Beers founded the Connecticut Society for Mental Hygiene, the National Committee for Mental Hygiene (e.g., currently known as Mental Health America). He opened the Clifford Beers Clinic in New Haven, an outpatient mental health facility, and became the Honorary President of the World Federation for Mental Health (Beers, 1921). Beer's leadership in the mental health discipline continued until he retired in 1939 (Parry, 2010). Countless reform efforts followed, changing the institutional care model to include additional government programs and interventions. Despite the challenges of regulating mentally ill patients in a punitive setting, future laws prevailed to push for deinstitutionalization for patients with behavioral health disorders.

The deinstitutionalization movement of 1945-1955 declared the discharge of state long-term mentally ill inpatients, forcing them from one level of confinement for another,

i.e., short-term community-based care, jails, prisons, nursing homes, homeless or worse (Helmicki, 2017; Schildbach & Schildbach, 2018). The deinstitutionalization policy derived during the civil rights movement when different classes of people entered mainstream America. The policy's goal included changing the belief that state mental hospitals were inhumane, that the newly introduced antipsychotic medications provided a cure, and the government would save money. Researchers question the basis of deinstitutionalization, predicting no better quality of life for behavioral health patients, only for them to be reintegrated right back into society. They debated the level of care available after the era of deinstitutionalization, contending that millions do not have adequate mental health care (Lamb, 1984; Pashak, 2017; Sisti, 2015). According to the National Institute of Mental Health (NIMH), more than 6% of the population suffers from chronic mental illnesses that produce moderate-to-severe disability for extended periods. Indigent, uninsured SMI patients accounted for 14.8 million, 234,564,000 in 2010, estimating 50 beds per 100,000 people met acute and long-term care needs; however, some states showed beds as low as 5 per 100,000 people.

The 1939 Penrose hypothesis on transinstitutionalization proposed equality between the number of psychiatric beds in proportion to the prison population. The theory suggested that compensation imprisonment was a punishment for poor and behavioral health patients. Lionel Penrose (1939), an English scientist, introduced a correlation between variables, the number of psychiatric patients and inmates, proposing that mentally ill patients discharged from psychiatric hospitals end up in prisons. A Meta-analysis, longitudinal, and other studies followed, but none disproved Penrose's direct

inverse association theory. Furthermore, asserting the idea as a valuable point of reference regarding patients with mental illness, incarcerated with no viable means of sufficient treatment or forms of rehabilitation, emphasizing those with SMI (Ben-Moshe, 2017; Schildbach & Schildbach, 2018).

The history of behavioral healthcare is significant to understand the problem and basis of this study; the origin of behavioral health services leading up to the 21st century. More work remains in treating high-risk patients with mental health problems (Lamb, 1984; Pashak, 2017).

Warburton and Stahl (2020) compared the conditions of patients with psychotic disorders to a pendulum, swinging from institutional neglect to community neglect and back again throughout hundreds of years. Warburton and Stahl (2020) equate treatment failure to failure in mental health policy and funding. Separate policies and financing between the level of care provided for institutionalized and community-based patients differentiate between behavioral health patients with poor mental health versus those high-risk or SMI patients. Uninsured behavioral health patients depend on taxpayer dollars to receive care, while block grants support community-based care for behavioral health patients in the State of Georgia.

Comparatively, Perera's (2020) research advocated both community-based outpatient and inpatient services as interdependent, complementing one another and evolving together in mature systems, insinuating that neither system loses. Perera (2020) argued that acquiring the best policy precedence involves an aggressive community-based outpatient system that includes de-stigmatizing the mental hospital. Perera (2020)

concluded by protesting that policymakers and payers managing mental health services take their attention off, impeding hospital care. For example, if the revolution is successful, institutionalization can prosper patients and their families. Therefore, a healthy mental health care system's evolution can proceed, proposing a structure like an Accountable Care Organization (ACO), Kathol et al. (2015). Collaborative care between mental health services exemplifies hospital and community-based outpatient care (Smith, 2020).

One commonality exists despite the contrasting elements between the inpatient and outpatient behavioral health services. The 'revolving door' effect, high-risk and SMI patients utilize both services due to increased readmissions, inadequate discharge disposition, and a lack of next-level access to care in rural areas (Boudreau, 2019; Graves, 2020; Lasko, 2019; Mooney, 2019; Richey, 2018).

Readmission Rates

Moya Woodside first introduced readmissions while conducting 1953 medical research, examining psychiatric patients' outcomes in London, describing readmissions as a repeated return for hospitalization within 30 days (Woodside, 1958). Behavioral health patients with multimorbidity's may receive substandard care, making them susceptible to readmissions controlled with medication management and post-discharge follow-up care (Germack, 2019; Gopalan et al., 2018). Thirty-day readmissions became the standard research method for examining hospital protocols for many studies, specifically those implying low-quality care. Nowadays, many readmissions evolve around the research and background, established using a time window from the point of

discharge (e.g., "*n*-day readmission"); typical windows are 14, 30, 90, and 180 days (Wan et al., 2016). Factors other than the time window dictate hospital readmission outcomes. Therefore, further understanding of readmissions has provoked other methods, models, interventions, and screening tools necessary to ascertain specific risk factors associated with readmission rates (Gaynes et al., 2015).

Medical literature defines *readmissions* as widespread, costly, and preventable occurrences within short-term care. A systemic review of more than 30 studies was conducted between 1966-2010 on hospital readmissions, confirming an average prevention rate of 27%, fluctuating between 5% - 79% (Fadul, 2019). Readmissions may be avoidable due to many screening tools such as risk scores and risk identifiers, which are available for providers to forecast patients with high-risk readmission rates; nevertheless, unable to predict which patients to readmit. Readmission screening tools, interventions, and models correlate to various clinical disorders and illnesses; some work and others have been inefficient and dated (Taylor, 2016).

The LACE index, a risk stratification tool endorsed by the Institute of Health Improvement, is an acronym describing the length of stay (points 0-6), acuity of admissions (points 0-3), level of comorbid illness (points 0-6), and emergency department visits (points 0-4) within the last six months; identify patients at risk of readmissions with a defined number of items ranging from 1-19 (i.e., 0-4 low, 5-9 moderate, and 10 $\geq$ high). The predictive value for readmissions is moderate to high and high for emergency department returns; therefore, determining the LACE score during discharge may allow the treatment team to pinpoint patients with increased risk for

readmissions (Damery & Combes, 2017). A vital component of the LACE index, comorbidities, is the known driving force pushing the newer version of this predictive model. The original LACE index varies in a couple of ways. Before the revision, the difference between components is as follows: Length of stay began with 7 points lasting 14 or more days, and now it consists of 6 points for the same number of days. Comorbidities consist of 5 points when the revised version goes up to 6 points (Damery & Combes, 2017).

A clinical risk index tool called READMIT assist in predicting inpatient psychiatric 30-day readmissions for high-risk patients. Variables associated with the READMIT acronym are:

- R-repeat admissions.
- E-emergent admissions (e.g., dangerous to self and others).
- D-diagnoses (e.g., psychotic disorders), unexpected discharge.
- M-medical comorbidity.
- I-intensity (e.g., prior inpatient use).
- T-time in hospital (e.g., LOS), Rogue, et al., (2017); Vigod et al. (2015).

This tool is administered before discharge to gauge the likelihood of 30-day psychiatric hospital discharge readmissions for high-risk inpatients. The probability of 30-day readmission will increase by 1-point according to the READMIT score (i.e., a range of 0-41) by 11% (odds ratio 1.11, 95% CI 1.10 -1.12), Vigod et al. (2015). The READMIT components exist in various clinical settings to flag high-risk patients, identify the target population for research purposes directed at decreasing readmissions,

and utilize a systemic level to coordinate programs to areas of demand (Rogue et al., 2017; Vigod et al., 2015). Establishing the risk of psychiatric readmission for high-risk patients to avoid bad outcomes consists of the evaluations, improvements, delivery of interventions, and structure in using the READMIT index for patients at high risk of 30-day readmissions pre-discharge. Advancing the coordination and transition to community-outpatient care for inpatient behavioral health discharge (Rogue et al., 2017; Vigod et al., 2015).

Hansen et al. (2011) and Taylor (2016) explored interventions to decrease 30-day rehospitalizations, classifying those interventions into three domains: (1) pre-discharge interventions—discharge planning, education, follow-up appointments before discharge, and medication reconciliation. (2) post-discharge interventions—home visits, follow-up telephone calls, and follow-up provider visits. (3) bridging interventions—physician continuity, patient-centered discharge instructions, and transition coaches.

Administrative diagnosis codes and subjective qualitative criteria have identified the cause of hospital readmissions as an avoidable occurrence. Taylor (2016) presents a systemic review of literature suggesting subjective measures as the reason inpatient hospitals encounter unidentified preventable readmissions. Research surrounding the cause of readmission rates is infinite due to the unexplainable rationale involving common and complicated factors associated with varied healthcare disciplines. Hospitals create methods and quality improvement plans to address readmission rates effectively, which explains the plethora of interventions regarding hospital readmissions.

The Project Reengineering Discharge (RED) intervention tool systematically engages the patients in the discharge process involving 12 literary elements. Before any constructive interaction, the patient must communicate their language of choice (Cancino et al., 2017). Post-discharge care, medical, and ancillary tests follow-up appointments must take place. Further plans to retrieve said medical and ancillary results are necessary, and any medical equipment is required. Address the medication reconciliation, which medicines are needed, and where the patient should obtain the list of medications. Educate the patient on their diagnosis according to the medications received. Conform and adapt to the guidelines set forth to influence recovery. Introduce a contingency plan, what to do during an emergency, relapse, or possible support plan—release the patients' health information (i.e., discharge summary) to the discharge clinicians and providers. Communicate the discharge plan to the patients in layman's terms while assessing the patients' level of understanding. Arrange telephone support of the discharge plan (Cancino et al., 2017).

The Better Outcomes by Optimizing Safe Transitions (BOOST), 8 P's risk stratification tool, were designed to flag patients at risk for 30-day readmissions assuming that similar tools were deficient in predictive power. Sieck's and Burkhart's (2019) quantitative research study measures eight variables by examining elderly patients (n=6849) for one year. The first study is to verify the validity of the BOOST 8 P's risk stratification tool designed to use electronic medical records to capture social determinants of health. The strength of variables associated with readmissions derives by using odds ratios, measuring the increased odds of a patient or illness when the risk factor

is present (White, 2016). Cause and effect are not evaluated by odds ratio; however, it may forecast the elements capable of increasing the odds of an occurrence (White, 2016). The predictive strength of the BOOST risk stratification tool uses multivariable logistic regression. Out of the eight variables assessed, significant correlation with 30-day readmission reflects—index admissions ($P \leq .001$), depression ($P = .003$), health education ($P = .030$), physical limitations ($P \leq .001$), and medication problems ($P = .001$); resulting in a final assessment of a defined predictive power with a C-statistic of 0.631, derived from linking variables with multivariable logistic regression (Sieck & Burkhart 2019).

An evidence-based framework, the Ideal Transition in Care (ITC) model, combines specific components of transitional care interventions that research studies have deemed effective and efficient to provide a contextual blueprint for model interventions. The umbrella of the Ideal Transition in Care model highlights ten domains linked to the following variables, discharge planning; outpatient follow-up; information transfer; patient literacy; social and community support; medication safety; coordination of care; self-management; engagement; and monitoring and managing symptoms post-discharge. Transition Care Coordinators (TCCs) compare the standard protocol of care to a targeted, specific method that focuses on a structured needs assessment (e.g., identifying modifiable barriers) associated with certain illnesses, conditions, or disorders. Supplementing conventional care with the delivery of interventions based on the ITC model allows TCCs to flag eligible patients during admissions for close collaboration among key providers and clinicians regarding discharge needs. Classic interventive

models and patient-centered initiatives facilitate early discharge planning and prioritize services that may prevent readmissions (Kripalani et al., 2019).

These interventions assist in the construction of performance improvement initiatives geared toward patient characteristics and risk factors. Interventions incite the best intentions, and exhaustive literature shows how difficult it may be to diagnose the root of increased readmissions across disciplines.

Ashton and Wray (1996) conceptualized readmissions as a quality indicator, discovering a significant correlation between readmissions and the process of care during the previous admission. Aston and Wray (1996) contend that dying as an inpatient and the possibility for readmission, supposing the patient is alive and discharged, are strongly associated with a diagnosis. Analyzing within diagnoses as opposed to across every diagnosis may render a precise indication of those at risk of being readmitted, which may require specific post-discharge instructions. Aston and Wray (1996) described post-discharge medical care as an opposite-sign confounder, whereas clinicians may discharge high-risk and unstable patients as a reliable safety net. Aston and Wray (1996) assumed that aftercare services are transparent, defined, and structured for those high-risk patients discharged into the community; however, the assessment and outlook in those days differ from existing data. Post-discharge data surrounding the reoccurrence of readmissions back then were not understood, involving the providers' levels of aftercare services to compensate for early inpatient discharge. Readmissions as a quality indicator include inpatient and post-discharge care (Aston & Wray, 1996).

Perera's (2020) and Smith's (2020) research from this era hypothesized an association between hospital and community-based care as unidirectional. Extensive behavioral health hospital services advance quicker than community-based care. Despite the discipline, the bridge between conventional medical care and behavioral health care relative to the transition from hospitalization to community-based care is the same. Both fields are something that policymakers, lobbyists, regulatory agencies, and consumers need to understand. There is an equal need for both service dynamics, and they must complement one another to provide quality care on every level.

Bernardo and Forchuk (2001) stated that research involving psychiatric readmissions confirm the constant 'revolving-door' problem. Psychiatric services remain a problem nationwide, and this study examines the number of high-risk patients experiencing minimum access to inpatient and outpatient psychiatric services within their community. Utilization of emergency psychiatric service from a centralized location provided patients previously admitted to the same hospital for repetitive admissions. More than 30% of patients had a primary diagnosis of schizophrenia on their first discharge, while 28% had a mood disorder diagnosis, 13% with a schizoaffective disorder, and 10% had a personality disorder (Bernardo & Forchuk, 2001). Readmissions following the index discharge over three years reflected a mean+SD number of readmissions as 1.04+1.67. More than 80 patients readmitted one time, while the number of patients readmitted up to four times decreased each time (e.g., with 200-100% index admissions, the first readmissions equaled 88-44%, second readmission 54-27%, third readmission 29-14%, and the fourth readmission 15-8%).

In addition, the Average Length of Stay (ALOS) and the average time between admissions decreased with the number of readmissions. Readmissions far exceeded index admissions of patients noted to have a poor mental illness, opposed to those with SMI, showing a 'revolving door' effect. The readmitted patients were veteran (e.g., diagnosed for years), while the index readmissions were the younger generation; first-time diagnosed, adding to the 'revolving door' problem. Even though the provider referenced a primary diagnosis of SMI, the subsequent secondary diagnoses were worsening of symptoms (94%), aggression (34%), substance abuse (25%), difficulty coping, and persistence of symptoms (92%), medication noncompliance (46%), and relationship difficulties were 59%. Between those patients readmitted and those experiencing their first index admission, the history was the same and conducive to suicide attempts, emotional, physical, or sexual abuse (Bernardo & Forchuk, 2001). A vicious cycle: problems like these have existed for many decades, despite the constant development of mental health policies and the unpredictable transition of the behavioral health delivery system. The reality is that people seeking behavioral health services will present with a plethora of reoccurring and complex problems that cannot quickly resolve, which render these individuals susceptible to other crises, treatments, and institutionalization (Bernardo & Forchuk, 2001).

Nowadays, with the wealth of research involving behavioral health disorders, it is not surprising to know that severe mental disorders have an increased rate of comorbid substance abuse (Fuller et al., 2016; Okafor et al., 2016; Reif et al., 2017; Smeets et al., 2020). Bernardo and Forchuk (2001) claimed that psychiatric facilities might not have the

ability to confront this problem. System variables and other determinants may influence readmissions, further explaining other problems being conducted in a cursory manner—seeing patients with SMI as mundane with immutable issues. Bernardo and Forchuk (2001) identified discharge planning as another factor that needs addressing, affecting readmissions.

In the United States, discharge planning is a legally mandated function for hospitals as outlined in Medicare's Conditions of Participation from Centers for Medicare & Medicaid Services (CMS). The purpose is to identify patients suffering from adverse consequences. Collaboratively determine the proper care level with appropriate healthcare professionals. Match patients to the most appropriate post-acute services, and assure a smooth, planned, and gap-free transition of patients to the next level of care using the proper discharge disposition.

Discharge Disposition

Discharge Disposition or discharge status refers to the anticipated receiving location where the patients' discharged for continuity of care purposes following an inpatient episode of care, e.g., outpatient community-based facilities, home, day programs, Assertive Community Treatment (ACT), Coordinated Specialty Care (CSC), rehabilitation centers or other intensive outpatient programs. The next level of care the receiving facility can provide to meet the patients' needs, articulating readmission risk stratification and post-discharge needs, substantially affects the patient's health and may assist in preventing readmission (Glick et al., 2011). Disposition evidence-based practice begins with the clinical staff and providers examining the patient, completing orders, and

coordinating care plans right away to ensure a structured transition. Historical research from a controlled study suggests evidence-based practice for treatment involving specific illnesses and disorders regarding inpatient processes and procedures, LOS, and outcomes (Glick et al., 1974). Discharge planning since the deinstitutionalized era has proven to be a standard process for hospitals; analyzing existing data and procedures may contribute beneficial knowledge and opportunity for improvement. Understanding inpatient behavioral health discharge planning practices is vital while connecting patients to the appropriate next level of aftercare services (Manuel et al., 2015). Implementing a comprehensive discharge plan conducive to a customized disposition plan may improve readmission rates within inpatient behavioral health hospitals, mortality, incarceration, relapse, homelessness, and address the next level of access to care barriers (Habit et al., 2018). Individuals with SMI and co-occurring substance use disorders require patient segmentation services due to their illnesses and heterogeneous needs. In contrast to traditional services, discharge planning or disposition planning and standardized access to care modalities may decrease the number of readmissions and the patient's quality of life (Intansari, 2014).

Discharge planning in the disciple of inpatient behavioral healthcare remains an essential process composed at the time of admission. Richey (2018) and Alghzawi (2012) defined *psychiatric discharge planning* as a concise, comprehensive, thorough process, collaborative coordination of aftercare or outpatient services. Richey (2018) examined discharge planning according to adolescents receiving recurring inpatient psychiatric treatment, which correlates with Alghzawi's (2012) study regarding the psychiatric

discharge process. Xiao et al. (2019) describes "discharge planning as a complicated, multifaceted concept consisting of six attributes: comprehensive assessments; collaborative, patient-centered care; resource management; care and service coordination; discharge planner role, and a discharge plan" (p. 1). This process starts during admission with a thorough assessment and stabilization of the patients' condition, coexisting with a treatment plan, and correlates to hospital readmissions and continuity of care. These concepts help hospital administrators, providers, and policymakers construct and enforce effective discharge planning initiatives, policies, procedures, and guidelines, allowing for the use of a discharge planning instrument (Xiao, 2019).

Discharge disposition is a vital component of the discharge planning process; designing a constructive discharge plan depends on the patient's location post-discharge. The discharge team must have a mutual awareness of the risk and benefits of the patients' placement alternatives to establish the next level of the care continuum for each patient (Sharfstein et al., 2009). Post-discharge care may rest on the patients' length of stay (i.e., short-term acute care). Therefore, the patient receives the better part of their care in the aftercare process, contingent upon the probability of hospital readmissions.

The Mental Healthcare Act (2017) mandates that adequate discharge planning must be completed and recorded before the finalization of the discharge from Mental Health Establishments (MHEs), Gowda et al. (2019). Patient-centered care is a crucial component of discharge planning. The individual and the family assist in developing a plan customized for the patient before discharge (Gowda et al., 2019). This detailed plan consists of an organized network of licensed, skilled, and trained professionals, which is

necessary to expose the risks and bring awareness of the benefits to appropriate placement within the community upon discharge.

State-owned inpatient behavioral health hospital administrators are responsible for managing inputs (e.g., human capital, resources, data, equipment, and technology) to bring about the outputs, the Health Service Organizations (HSO's) and Health Services (HS's) vision, mission, and objectives (Longest and Darr, 2014). Hawke's (1961) research associated the psychiatric administrator's role with core functions related to three contracts, each representing a specific set of relationships amongst the administrator and internal and external stakeholders. The administrator's office is considered the central business office where major decision-making is conducted, characterizing the psychiatric hospitals as social systems, a structure resembling a small but intricate multifaced role. Hawkes (1961) contends that this type of system or analysis has exposed the most perplexing problems of HSO. However, this approach has overlooked the hospital as a "complex special-purpose organization" connected to a much greater social environment (p. 90). Social class was examined by investigators, showing a correlation between the type of treatment received by the mentally ill patients and class affiliation, linking empirical significance to the hospital's operations and social systems, revealing no good theoretical relationship between the two phenomena. Hawkes (1961) research attempted to show a correlation between the hospital and the social environment relative to the psychiatric administrator's role, further asserting no evidence of organizational behavior concerning this small-social-system approach. Hawke's empirical evidence pertains to the qualitative observation from two years of research on administrative

processes retrieved in psychiatric hospitals within the state system regarding one state hospital. Hawkes gained residual knowledge from formal and informal meetings, obtaining data from interviews, systematic observations, and repetitive gatherings with key administrative peers. The research Hawkes (1961) conducted influenced a theoretical framework entitled Role Identity (e.g., based on three contracts), describing three sets of relationships defining the role of the psychiatric administrator: (1) official administrative control (2) commitment to the mentally ill (3) political, legal, and financial support.

In contrast, Sharfstein et al. (2009) state that psychiatric hospital administration nowadays sets higher standards than those in the most complex of hospitals. This subset covers many central administrative components, i.e., professional, administrative, clinical, policy, ethical, regulatory, legal, systems, accreditation, and business within the community service areas. Advancing government regulations and the Joint Commission on Accreditation hold hospital administrators accountable for compliance programs; the day-to-day maintenance and strategic planning of hospital operations (Behavioral Health Care and Human Services, 2020).

Talbot and Hales (2001) contradicted Hawke's (1961) assessment on a boundary-sustained administrator's position by advocating the value of an organizational structure depending upon what he describes as a boundaryless organization, whereas departments may takeover task groups. Although changes are constant in organizations, leadership continues to be crucial and unchanging. Administrators' role in coordinating divergent individuals' adaptive activities in resolving human issues has a transformative foundation. Any organization's purpose is to evolve and survive, understand the

organization's existing condition, ascertain any potential problems, create a strategic plan for resolving the potential issues, and influence staff to accommodate the hospital administrator in achieving a strategic plan if required. Soliciting the support of everyone in the organization remains paramount in new healthcare organizations; psychiatric administrators must be vigilant in supporting the team's actions and performing in leadership positions within teams of professionals. Whereby the licensed expertise of each constituent is acknowledged, supported, and involved to improve the work. Administrators must be submissive to the provisions of unofficial authorities to challenge processes that do not work. Influence a culture of shared beliefs for change, cultivate an action-driven environment led first by the administrator, empower direct reports, and incentivize performance-based attitudes and values (Talbot & Hales, 2001).

The psychiatrist records the patients' mental history at admission; remember, discharge planning starts during entry (Graves, 2020; Richey, 2018; Sharfstein et al., 2009). Next, a standard physical and neurological assessment detailing a mental status examination occurs (Sharfstein et al., 2009). Networking with other referring clinicians and family members to gain residual historical data is also significant for the psychiatrist to treat the whole patient (Graves, 2020; Richey, 2018, Sharfstein et al., 2009). In addition, one of the main components necessary to further assess the patients' behavioral health would be the retrieval of their most recent pharmacological treatment; this is also important if the patient is struggling with substance abuse issues. The psychiatrist gains insight on what medications have worked in the past, which ones did not, and what medication allergies the patient has at the time (Sharfstein et al., 2009). A narrative case

summary pursues, compiling the patients' health and a multiaxial diagnosis obtained. When conducting a team meeting (e.g., nurse, activities therapists [occupational, art, and physical], social worker, health service technician or forensic service technician, psychologist, behavioral specialist, and utilization review specialists) during this stage consists of an overview of the patient's chief complaint regarding the admission or episode of care. The treatment team fulfill objectives and methods to determine who will delegate and participate in the intervention process and the benchmark used to establish when the discharge is viable (Sharfstein et al., 2009). The master treatment plan (e.g., a roadmap to recovery) controls and guides the entire team's therapeutic endeavors. In contrast, a standing order of meetings will pursue to test the solidarity and effectiveness of the plan (Sharfstein et al., 2009). The psychiatrist dictates the patient's entire recovery process, leading to the discharge planning and disposition process. The psychiatrist must communicate the patients' diagnoses, status, medical necessity, and treatment plan to insurance representatives responsible for managing the patient's benefits, justifying a continuum of care for further hospitalization (Sharfstein et al., 2009). Many state-owned behavioral health patients' socioeconomic status is indigent, underinsured, uninsured, and seriously ill, making it difficult to render effective inpatient behavioral health care (Sharfstein et al., 2009). Reduced reimbursement rates and shorter lengths of stays often force patients to be discharged earlier into community-based outpatient programs. These programs are limited to the next level of care established for individuals with poor mental illness and little adequate access to care for high-risk patients (e.g., SMI), which is

needed to sustain them, often causing readmissions (Alghzawi, 2012; Graves, 2020; Starfstein et al., 2009).

The role of the psychologist depends on hospital privileges. They may serve on medical staff committees, perform in the attending clinician's capacity, engage in the hospital's governance, perform psychotherapy, or oversee behavioral programs (Sharfstein et al., 2009). The psychologist also is responsible for evaluating inpatients with psychological tests to ascertain medical inquiries relative to referrals from the psychiatrist or other professionals. The psychologist, like the psychiatrist, may assume the administrative role of the HSO, function as one of the treatment team members, and collaborate with other key professionals, i.e., social workers, nurses, and mental health technicians (Starfstein et al., 2009).

The psychiatric nurse performs multifaceted roles and offers behavioral health services from the start of the admission process to the discharge process. The nurses manage patients with mental illness, which requires a specific skill set and comprehensive training. Nurses serve as counselors, crisis stabilization, and intervention specialists. Nurses monitor the progression of treatment, medication administration, network with non-mental health service providers, and participate in the transitional care for pre-discharge and post-discharge (Houlihan, 2005; Nxasana & Thupayagale-Tshweneagae, 2016).

The clinical social worker is responsible for obtaining information regarding public assistance such as medical aid, Social Security, and disability services on behalf of the patients (Sharfstein et al., 2009). Social workers play an essential role in the mental

health system. Richey (2018) described the clinical social worker's leading position as conducting clinical assessments, further outlining the strengths of a comprehensive clinical assessment as a tool used to obtain evidence to articulate the root cause of the patients' problems. In contrast, Noyola et al. (2014) described generalizability as a weakness associated with completing a social worker's clinical assessment. Failing to distinguish between the assessment's personal and clinical components creates a treatment or discharge plan with no merit. Graves (2020) described the clinical social worker's duties relative to the discharge planning process as the most critical aspect of their job. Advocating for the patients is second nature; connecting them to resources, mediating behavioral issues, arranging family meetings, and representing them in team meetings is daily. However, there are barriers that social workers must deal with during the treatment and discharge planning process, which leaves them feeling powerless (Graves, 2020). The complexities of the discharge planning process evolve around the tailored construction of transitional care and aftercare. Yerushalmi (2017) contended that for people with SMI, recovery efforts are subjective, depending on how they define their lives and self-image. Transitioning mentally ill patients into community-based outpatient programs is the main component of the discharge planning process for social workers (Humensky et al., 2017).

The occupational therapist provides safety skills or daily living assistance, preparing the patient for role obligations and how to face challenges head-on. The recreation therapist helps with community resources, participating in social fulfillment activities (Sharfstein et al., 2009).

The discharge plan includes the patient's diagnosis, a compiled list of medications, follow-up appointments for medical and behavioral healthcare, rehabilitation, housing, social networks, a list of emergency phone numbers to call, referrals, and recommendations for continuity of care purposes (Sharfstein et al., 2009). The main goal of the discharge plan for the patient involves cultivating the highest quality of life within the least restrictive environment possible (Sharfstein et al., 2009; Richey, 2018). The discharge planning process must begin upon admission because the length of hospital stay during an episode of care dictates the flow of events related to a vast collection of concurrent data, such as observations, evaluations, and psychosocial documentation. Family or other support systems for the patient weigh heavily on their recovery, an adage from a clinical decision-making study state, "the art of good discharge planning also involves the need to engage the patient, family, and care systems within briefer time frames" (Tuzman & Cohen, 1992, p. 300). The patient's duration in the hospital is prevalent in the care rendered and discharge planning process. The length of stay dictates insurance restrictions, among other significant factors like the severity of the patients' diagnoses, treatment team specifications, and post-discharge resources (Sharfstein et al., 2009). Evidence has shown psychosocial problems connected to more extended hospital stays; therefore, serious consideration while strategizing a cohesive treatment plan must occur (Slatcher & Selcuk, 2017). Richey (2018) assert that patients lacking appropriate discharge planning are subject to increased readmissions. Therefore, adhering to a structured next-level care community-based outpatient program is significant to a long recovery. Alghzawi (2012) made the same assessment many years earlier, contending

that discharge planning inadequacies may disturb the continuity of care for the patient, which is the most crucial stumbling block in achieving optimal recovery, which occurs in various modalities (LaBelle & Edelstein, 2018).

Self-help groups provide an option in aftercare, creating an avenue for involuntary support for the patient to interact with other individuals with the same shared experience (Alghzawi, 2012). These groups are set up on an informal basis, outside of a formal system of care where other programs are available (Talbott & Hales, 2001). The downside to self-help groups for high-risk behavioral health patients centers on the absence of a formal administrative structure; the patient cannot distinguish between those receiving help and those providing the service (Talbott & Hales, 2001). Self-help groups may not receive the resources needed. This avenue of independent support may not be long-term or perhaps function in a manner conducive to the standards enforced by extrinsic demands; therefore, it is significant that the patient has many options (Talbott & Hales, 2001). The main goal of self-help options is to create an environment where peer support promotes problem-solving effectiveness. Practical solutions and the worldview of others offer a wealth of social resources, which reduce isolation, establishing an open forum for a more intimate dialogue that would otherwise be off the table for discussion (e.g., fear), Talbott and Hales (2001).

Relapse prevention groups assist the patient in identifying those early warning signs of relapse (Alghzawi, 2012). Pre-discharge, the patient should be encouraged to create and adhere to a relapse prevention plan and corresponding action plan if there is an occurrence of high-risk situations. Preparing patients for these situations teaches them

clear problem-solving strategies that may prevent impulsive behaviors accompanied by poor coping techniques (Sharfstein et al., 2009). Patients use literacy as a teaching method in relapse prevention groups to understand their disease or disorder and avoid reoccurrence. These simple steps of early recognition can help the patient obtain early treatment, thereby averting relapse. Relapse literacy material offers the patient additional informative resources regarding community support programs (e.g., narcotics and alcoholics anonymous), adding to their relapse prevention plan (Sharfstein et al., 2009). Change is inevitable during the recovery process, so developing a support network and discussing the struggles of change can be advantageous during these moments of uncertainty. Relapse management and prevention could be a prosperous endeavor within group settings with fixed resources and limited time (Sharfstein et al., 2009).

Incorporating the patients' families into the relapse prevention plan sets the patient up for success. The family must know when it comes to the patient's symptoms and triggers; they can understand past behaviors that worked or those that did not work and whom to call in times of a potential relapse, such as providing emergency numbers (Sharfstein et al., 2009). Behavioral health disorders and diseases can be unpredictable, carrying a higher rate of relapse and at no fault of the patients' own; this remains true regarding comorbidities such as the case with those patients suffering from substance abuse and major depressive disorders (Sharfstein et al., 2009). Patient literacy allows the patient and their family to understand their level of illness or increase. Utilizing the proper action plan in the event of relapse should not shame the patient or provoke negative thoughts;

therefore, the educational materials, relapse management, and prevention plan inspire self-help behaviors.

After discharge from a behavioral health hospital stay, outpatient counseling ensures patient continuity of care and relapse or readmission prevention (Alghzawi, 2012). Nelson et al. (2000) found that psychiatric inpatients having post-discharge appointments in place as a part of the discharge planning process will dodge relapse and rehospitalization. The research examined more than 3,000 hospital admissions during one year between two groups of patients, 2,212 (71%) patients' discharge planning reflected an initial follow-up appointment, 1,735 (78%) kept their initial follow-up appointment, experiencing no future readmissions. Nelson et al. (2000) strongly recommended that future researchers examining rehospitalization focus on discharge planning and suggest aggressive actions for patients who are non-compliant with discharge planning because of the amount of significance it holds.

Mental health services must be a permanent part of the continuum of post-discharge care for high-risk behavioral health patients, especially for those requiring medication management (Alghzawi, 2012). Antipsychotics medications in 1952 may have advanced the deinstitutionalization movement, causing a difference between increased readmission rates and discharges (Lee Pow, 2012). Medication management ameliorates the most severe symptoms of high-risk patients or those with SMI, such as schizophrenia and mood disorders (*sine qua non*). Jaffe (2017) brings attention to the lack of resources needed for mental health treatment how dissimilar the allocation of funds between those with poor mental health opposed to funds for SMI patients. Medication

non-adherence exacerbates the risk of relapse, suicide, violent behavior, rehospitalizations, and emergency mental health services (Jaffe, 2017). In addition, further non-adherence may result in recidivism, chemical dependence, poor cognitive functioning and quality of life, victimization, and a flawed patient worldview (Jaffe, 2017). Policymakers must understand the importance of medication management. Jaffe (2017) described the implication of medication non-adherence for patients with SMI as a possible detrimental death sentence; stressing the difficulties of getting patients with SMI on the correct medications, dosage, and maintenance is vital. These efforts take a considerable amount of time and require instant access to providers with very limited to no wait time, reiterating the significance of adequate next-level access to care for high-risk patients.

The Intensive Outpatient Program (IOP) is an intensive care management monitoring and support system, providing treatment in a manner conducive to patient-centered, non-restrictive, structured, and supportive care. Serious Mentally Ill (SMI) or high-risk patients feel robbed of their ability to function effectively, impacting their quality of life. Therefore, intensive programs help restore functionality and engender a positive quality of life in a way that can facilitate the advancement of new roles (Sharfstein et al., 2009). Intensive programs come in many variations, but the one more suited for high-risk patients is hospital-based intensive outpatient programming. It offers many services where the patients can focus on their goals, hobbies, strengths, and passions—intended to consolidate an array of rehabilitative and therapeutic interventions centered on symptom stabilization within a community-integrated worldview (Munetz et

al., 2019; Sharfstein et al., 2009). This intensive outpatient program gives the patient the support of services provided by a high staff-to-patient ratio consisting of clinical experts (e.g., occupational therapists and psychiatrists), Sharfstein et al. (2009).

According to Alghzawi (2012), the psychiatric discharge process entails three main requirements; each must be accomplished before going to the next stage: (1) the first multidisciplinary discharge meeting must include the caregiver, psychiatrist, and patient. The patient will be the one to determine the timeframe between discharge meetings, which requires effective communication between the multidisciplinary team regarding the patients' progress. (2) regular discharge meetings should involve the treating physician, who establishes the patients' clinical status and post-discharge needs. The social worker completes the social service needs assessment to ensure that shelter is available to the patient post-discharge. (3) the discharge day and departure should conclude with a multidisciplinary meeting accompanied by the community receiving staff for consultation with the patient and caregiver, confirmation from the psychiatric nursing staff of the patient's readiness for discharge. The discharge meetings must include the discharge plan, adequate nursing care plan, guidance, and discharge planning checklist indicating the discharge requirements (Alghzawi, 2012). A copy of the checklist and the care plan should go to the patient and caregiver. The psychiatric nurse covers every aspect of the discharge plan with the patient, communicates the patient's current discharge status, and makes sure the patient understands their post-discharge procedures and arrangements. Accompanied with these arrangements are the patients' discharge medication reconciliation and regime, ensuring they know how to obtain their next

medication dosage. The discharge psychiatric nurse returns all the patients' belongings (Alghzawi, 2012).

One factor that can impede proper discharge disposition planning is next-level access to care, causing readmission rates to peek (Ballester, 2017; Graves, 2020; Richey, 2018).

Rural Access

The fundamental question asked by most people regarding healthcare access, first stated by the Institute of Medicine (IOM) in 1993, was, *"will I be able to get the care I need if I become seriously ill" (Serban, 2020, p. 1)?* Obtaining adequate healthcare at the time of need, within the most convenient location of need, and at the level of need should be a reasonable request; however, not afforded to all populations of people (Jaffe, 2017; Serban, 2020). Health systems must employ health(care) for every person and population to deliver healthcare services to individuals requiring them (Serban, 2020). Healthcare access consists of global, local, and personal resources, health policies, facilities, personnel, technology, and the means/knowledge to acquire services. These elements affect every degree of the healthcare system and policymakers, people, organizations, processes, and providers (Serban, 2020). A more defined interpretation of access demands a broader approach.

Guagliardo (2004) described access by two distinguished elements—a noun, which refers to the option of utilizing healthcare, and a verb, the efforts put forth to use or receive healthcare (Serban, 2020).

Aday and Andersen (1974) conceptualized access as a multidimensional interrelated realm of domains: (1) health policy; (2) characteristics of the healthcare delivery system; (3) characteristics of populations at risk; (4) utilization of health services; and (5) consumer satisfaction (Aday & Anderson, 1974; Serban, 2020). Andersen (1968) introduced his first behavioral access model in the late 60s, which centers on individuals' utilization of healthcare services according to their predisposition to employ services. Andersen (1995) updated the behavioral access model to include adequate access, achieved when access enhances the health status. Efficient access occurs when the health status level expands regarding the quantity of healthcare service utilization (Serban, 2020). Further research explored diversifying contextual and personal determinants (Anderson & Davidson, 2007).

Khan's (1994) projected conceptual model identifies access as the results of a process detailing the actions between the health care service system's tendencies and possible consumers within a specific area or locale and controlled by health care relevant public policy and planning efforts.

The framework of the 3 E's (i.e., Efficiency, Effectiveness, and Equity) define access in more simplistic terms. Efficiency measures the best utilization of resources by the system. Effectiveness measures the system's performance in obtaining a need or accomplishing a goal, ensuring fulfillment of the right thing. Equity pertains to the integrity of delivery, appropriation of resources, and attainment of results—to guarantee that every person or place in need of care is affected (Aday, 2004; Alegria et al., 2018). However, these demands are not always obtainable. The policy agenda dictates which

aspect of the three Es to affirm, the scope of resources, the status of the health policy, kind of services, and population in demand; as well as other considerations (Aday & Andersen, 1981; 2004; Davis et al., 2013; Serban, 2020). Agencies leading public health efforts possess the power to influence health policy, which affects the public or population, involving sound decision-making, actionable results, laws executed at the healthcare environment and organization levels (Serban, 2020).

The United States president oversees the Department of Health and Human Services, regulating public health efforts to advance behavioral health nationwide. Governed by the Department of Health and Human Services are the Substance Abuse and Mental Health Services Administration (SAMHSA), which took flight in the early 1990s with the dissolution of the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA-1972), Reorganization Act (Public Law 102-321). However, before the transition, the National Institute of Mental Health (HIMH), a National Institute of Health (NIH) sector, became the mental illness research custodial. Under the umbrella of SAMHSA, congress created the Center for Mental Health Services (CMHS) to fulfill mental health-related obligations such as mental health programs (Jaffe, 2017; Sharfstein et al., 2009; Talbott & Hales, 2001). SAMHSA, the federal agency in charge of the policies, programs, preventions, funding, treatment, recovery, data, community, and public leadership on the advancement of behavioral health services has replaced the scientific medical model of care with their well-defined recovery model (Jaffe, 2017; U.S. Department of Health & Human Services, 2020).

Jaffe (2017) described SAMHSA's recovery model as a form of care designed for political correctness. He advocates strongly for high-risk or severe mentally ill patients, stressing that SMI patients do not fully recover and cannot craft their recovery. Therefore, the model is not realistic for all patients with mental illness, specific to schizophrenia and mood disorders like bipolar disorder. However, Szasz (1987), a notable psychiatrist and psychoanalyst from Budapest, Hungary, contends that the language of *mental illness* is misleading and otherwise redundant, denoting that it is simply not a bodily illness; therefore, a myth movement. Szasz (1987) further explains the term as misleading to define *mental illness* as a medical model, to 'illness like any other,' that it makes no sense to adopt a nonmedical approach to it than it would to any other illness. If *mental illness* does not exist and the phenomena are not diseases, further elaboration regarding the medical approach should occur. Sisti (2010) describes a hybrid explanation of the definition of mental illness from a naturalistic and normative perspective, proposing to scholars and providers to accurately understand the ontology of both before attempting to diagnose either concept—health, disease, and illness.

Many contrasting observations of the medical model's theory relative to mental illness warrant a more defined interpretation from the agency regulating mental health research and prevention.

In their FY2019-FY2023 strategic plan, SAMHSA acknowledged that in 2017 more than 11 million adult Americans had a severe mental illness. These individuals often have multimorbid conditions, including co-occurring substance abuse disorders. They are at a high risk of suicide, recognizing that only a tiny population of these

individuals receive evidence-based care (U.S. Department of Health & Human Services, 2020). According to SAMHSA's FY2019-FY2023 strategic plan, the Interdepartmental Serious Mental Illness Coordinating Committee (ISMICC), a new federal advisory council, was authorized by the 21st Century Cures Act to improve the lives of people living with SMI (U.S. Department of Health & Human Services, 2020). In SAMHSA's FY2018 reimaged report, a proposed clinical, evidence-based focus approach introduced the purpose to improve business efficiency while advancing behavioral health nationwide (U.S. Department of Health & Human Services, 2020). During the FY2019-FY2023 fiscal year, the following reform efforts according to the 21st Century Cures Act regarding SMI exists:

⇒ ISMICC.

⇒ SAMSHA met the requirements set forth by Congress to develop a comprehensive report to address SMI by developing workgroups to reinforce:

- government planning,
- building evidence-based treatments,
- Determine the population affected by the justice system,
- resolve inconsistencies regarding access and what works,
- promote financial strategies that deal with accessibility and cost-effectiveness.

⇒ CMHS block grant established for persons with SMI or emotional disturbance, reserving 10% for those suffering from their initial psychotic episode.

⇒ Creation of the First Episode Psychosis (FEP) programs nationwide.

SAMHSA initiated a 23-state real-time bed registry to pinpoint bed availability and post-crisis follow-up services for those living with SMI (U.S. Department of Health & Human Services, 2020).

Before the SAMHSA's 2018 reimage report and their FY12019-FYI2023 strategic plan, the Chief Medical Officer (CMO) served from 2013-2015 resigned, revealing observations of an obvious resentment toward psychiatric medicine during her time there (McCance-Katz, 2016; 2020). According to the Psychiatric Times, Elinore F. McCance-Katz, MD, Ph.D., the first psychiatrist to hold the position of CMO appointed by HHS to oversee more than 500 federal employees at SAMHSA, left the organization just after a short period of employment (McCance-Katz, 2016).

Substance abuse is often perplexed by people with major depressive disorders, mood disorders, schizophrenia, and SMIs. These are high-risk behavioral health patients in dire need of evidence-based treatment, requiring effective and efficient safe clinical community resources (Jaffe, 2017; McCance-Katz, 2016). SAMHSA is the only federal governed agency out of the HHS system to head mental health programs with an annual budget of over $3.5 billion, with more than half-funded by block grants. States control the general distribution of mental health services (McCance-Katz, 2016; U.S. Department of Health & Human Services, 2020). Therefore, the considerable debate is whether SAMHSA has distributed equal resources toward those suffering from SMI. Since adopting the recovery model, there is a strong reservation concerning CMHSs acknowledgment regarding the validity of mental disorders like psychosis (Jaffe, 2017).

SAMHSA managed the National Registry of Evidence-Based Programs and Practices (NREPP), a database established in 1997 (e.g., 'force-fit' model), consisting of vendors used by the organization (Jaffe, 2017; U.S. Department of Health & Human Services, 2020). Jaffe (2017) contends that the vendors project non-evidenced-based programs, which they profit from at the expense of those who need evidence-based programs to recover. The CMHS supported and promoted mental health First Aid programs, which educate people on mental health awareness, introducing an avenue of support (Jaffe, 2017; McCance-Katz, 2016). The Triple-P Positive Parenting program provides literacy to parents of troubled children, teaching them how to parent constructively during moments of distress (Jaffe, 2017; McCance-Katz, 2016). The Wellness Recovery Action Plan (WRAP) offers wellness plan development literacy (Jaffe, 2017; McCance-Katz, 2016). Many intervention programs are available, but the ongoing argument evolves because more programs sustaining high-risk patients require those with SMI (Jaffe, 2017). However, Green-Hennessy (2018) reported that 35 of the NREPP interventions mentioned addressed people with SMI.

Intervention methods are suicide crisis lines; patients and their families or friends have a place to call for those moments of relapse, suicidal thoughts, or hopefulness (McCance-Katz, 2016). Primary care integrated programs are also available and essential, connecting mental health programs of primary care providers to treat the multimorbid conditions that many patients deal with non-stop (McCance-Katz, 2016). SAMHSA/CMHS provides many necessary programs, but little caters to high-risk patients and those with SMI (Jaffe, 2017; McCance-Katz, 2016; 2020). Programs also

consist of re-educating behavioral health providers and peer support, where other behavioral health patients become professionals by experiencing the same or similar struggles. Neither one of these services benefit individuals with SMI (McCance-Katz, 2016). From the list of beneficial programs that SAMHSA/CMHS offers, there should be even more advantageous programs dedicated to high-risk or SMI patients. If access to care does not begin with the funding, there will be limited to no access in the community. The most vulnerable patients must be the priority. Jaffe (2017) argued that SAMHSA/CMHS would not fix what they do not acknowledge. McCance-Katz (2016) corroborates some of Jaffe's (2017) concerns regarding accepting funding needed to support the continuum of access to care for people with SMI from an internal perspective. McCance-Katz (2016) emphasized reevaluating SAMHSA's organizational values by revising its goals for treating people with SMI and investing in a leadership culture conducive to healing high-risk patients or those with SMI. Develop new resource allocation initiatives to provide adequate next-level assisted outpatient treatment with enhanced psychosocial services. In addition, there is a need for long-term psychiatric hospital beds to bridge the shortage gap due to the deinstitutionalization movement.

Prioritized services for people with SMI consist of the following: scientific literacy programs, evidence-based treatments, and funding for provider training (e.g., psychiatrists, psychologists, and extenders), Jaffe, 2017; McCance-Katz, 2016. However, to articulate the neurobiological underbelly of mental health illnesses, regulatory structures like SAMHSA/CMHS should establish a better rapport with the NIMH (Jaffe, 2017; McCance-Katz, 2016). Effective and efficient treatment is the key to a more

significant recovery level for high-risk patients and those with SMI (McCance-Katz, 2016). Therefore, committing to anything other than constructing effective and efficient treatment programs for high-risk and SMI patients will be abandonment, discrimination, and neglect; for a population of people that have no choice but to depend on agencies such as SAMHSA/CMHS for access to care (Jaffe, 2017; McCance-Katz, 2016). For many years, cultural influence and many professional disciplines have proposed a dichotomy of ways to encourage change within the mental health delivery system (e.g., the exertion of pressure on Congress, political administration, and charitable organizations; along with the persuasion of lobbyists). Suppose they are passionate about high-risk patients' health and well-being. In that case, trained behavioral health professionals in every discipline should volunteer their services and commit to making policy changes using their expertise as a driving force. Despite those advocating from within the federal government, ostensibly on behalf of behavioral health patients, skilled experts know the neurobiological physiology of those with SMI better. They have the experience of caring for them according to their individual needs, making them even better advocates for policy change (Jaffe, 2017).

McCance-Katz (2016) described SAMHSA as dated and obscure; after two years in the position of CMO, she expressed discomfort in operating without specific standards of clinical evidence-based guidance, making her a poor fit for the organization in which she resides. McCance-Katz (2016) proposed changing the mission, current funded programs, and leadership to better the organization. She also suggests that Congress implement a legislative mandate to enforce these changes.

Green-Hennessy (2018) expressed a recent change regarding NREPP. Appointed by President Donald Trump as the HHS United States Assistant Secretary of Mental Health and Substance Use, after leaving her position as CMO, McCance-Katz used her power to make drastic changes (McCance-Katz, 2020). One significant change was suspending the NREPP database months before notifying consumers, reflecting on her initial recommendations after removing herself as the CMO (Green-Hennessy, 2018; McCance-Katz, 2016; 2020). According to Green-Hennessy (2018), more than 25% of the 479 interventions in the NREPP registry reserved from the 2015 guidelines (e.g., 'stoplight' outcome ranking system) were described as problematic. The residual 356 derived from the 2007 protocols (e.g., 'best fit' model), insinuating a redundancy in strapping the entire registry instead of simply restoring it with expert opinions and not empirical evidence. Credibility concerns exist after the SAMHSA's fourth attempt at an evidence-based registry (Green-Hennessy, 2018). SAMHSA's decision to substitute NREPP with an Evidence-Based Practice Resource Center may be at odds with the 21st Century Cures Act, which orders substance and mental health prevention and treatment to align with the body of scientific knowledge and public reporting (Green-Hennessy, 2018).

SAMHSA promotes social change efforts across many states. High-risk or SMI patients without family or friends depend solely on the government for access to care; this is where the disconnect exists; America is the wealthiest country and, at the same time, the poorest in leadership.

Barriers to access to care exist for high-risk behavioral health patients. *Access* is the ability to acquire healthcare as one may need it, which is more than just having healthcare insurance coverage, good organizational leadership, and resources to pay for services. Other determining factors include the availability of services, location, transportation, cost, hours of operation, cultural appropriateness, and good benefits (Tabott & Hales, 2001).

The U.S. Department of Agriculture (USDA) reports on the dilemma of health services in rural areas; the urban and rural populations do not have the same access. The discipline of behavioral healthcare is deficient in physical health care facilities, professional behavioral health personnel, and the capacity to afford the financial expense of illnesses (U.S. Department of Agriculture, 2020). In Fiscal Year 2017, the USDA invested $1 billion in rural health care through the Community Facilities Direct Loan Program, contributing $20 million to replace the Cook Medical Center in Adel, Georgia. The 95-bed nursing home accompanies a 12-bed geriatric psychiatric unit, including additional state-of-art hospitals in rural Georgia (e.g., Morgan Memorial Hospital), U.S. Department of Agriculture, (2020). USDA Rural Development offers grants and loans to help expand job availability and financial opportunities—infrastructure improvements; public safety, health care, business development; schools, homeownership; and high-speed internet access in rural areas (U.S. Department of Agriculture, 2020). In 2020, the USDA invested $871 million to enhance critical community facilities throughout 43 states and Guam, including many projects from gas meters to fire stations (U.S. Department of Agriculture, 2020).

Moreover, $2.8 million of that loan went toward what appears to be a short-term 10-bed adult inpatient psychiatric unit located within a rural general acute care hospital in Louisville, Georgia (U.S. Department of Agriculture, 2020). Between the 2017 & 2020 Fiscal Year investments for behavioral health services, resources consisted of geriatric patients and short-term stability services for adult inpatient psychiatric patients. However, no available resources exist for long-term inpatient behavioral health, high-risk or SMI patients; neither was a monetary contribution set aside for community-based outpatient next-level behavioral health care for those with SMI. According to Serban (2020), economic and social equity advocates realized that where individuals reside is conducive to their availability for economic growth, governmental assistance, and access to quality health care. Measuring a particular community's health is not enough; benchmarking must be incorporated to gauge the differences amongst other communities regarding the rurality level, socioeconomic environment, demographics, and policies (Reeves et al., 2013; Serban, 2020). Published studies have shown that one-fourth of adults in the United States will have a mental illness, and 0.46 will have acquired one episode during their lifetime, costing the United States a minimum annual expenditure of $300 billion (Keesler et al., 2005; Keesler & Wang, 2008; Reeves et al., 2013).

Definitions

The following definitions as it relates to the articulation of this study is presented in laymen's terms:

Access to Care. "The ability to obtain desired healthcare." Access is more than having Medicaid or commercial insurance coverage or the ability to pay for services. It is

also determined by available services, acceptable services, cultural appropriateness, location hours of operation, transportation, and cost (Talbott & Hales, 2001, p. 397).

Asylum. During the 1900s, asylums were the principal method of care for SMI patients, coined by Goffman (1968) as "total institution," the life of psychiatric patients in an institutional setting. Asylums replaced madhouses (Chow & Priebe, 2013; Cochrane, 1868, p. 115; Goffman, 1968).

Behavioral Health Inpatient Services. Comprehensive treatment requiring inpatient care for persons who have mental illness and addictive disorders or diseases. Inpatient services involve 24-hour care within a secure, safe, and structured facility to better high-risk patients or those with severe mental illness and substance abuse issues requiring consistent observation by expert personnel (API Behavioral Health Systems, 2021). There is a close correlation between substance abuse and mental illness, 50% of people with mental illness suffer from substance abuse disease, the dynamic of both disorders coined the term "behavioral healthcare" (The Center for Health Affairs, 2020).

Community-Based Outpatient. Outpatient services occur within a continuum, deriving from the most intensive to the least intensive interventions. An all-inclusive community mental health service allows patients to transition from one level of care to another depending on current needs (Sharfstein et al., 2009, p. 330).

Deinstitutionalization. The shift from hospital-based to non-hospital-based care and treatment of persons with mental illness (Sharfstein et al., 2009).

Diagnosis. A specific condition or disease affecting hospitalized patient (HCUP, 2022).

Discharge Disposition. The destination (i.e., home, or non-home), community setting or next level of care location to which the patient was discharged on the day-of-discharge.

Discharge Planning Process. Communicating with outpatient providers regarding treatment plans, schedule appointments for outpatient follow-up care, and forwarding discharge summaries to outpatient providers after an inpatient stay (Smith et al., 2017).

High-Risk. High-risk refers to behavioral health patients with well-established risk factors for developing psychosis, suicide, and addiction.

Hospitalization. The voluntary or involuntary admittance of a patient going through a psychiatric emergency to the hospital (Applebaum & Gutheil, 1991).

Institutionalization. A process by which patients with serious mental illness are confined to physical structures such as brick and mortar, adhere to policies and the legal framework regulating care while complying with clinical obligations and paternalism in a provider-patient relationship (Goffman, 1961).

Length of Stay. The number of nights the patient remained in the hospital for each encounter. A patient admitted and discharged on the same day has a length of stay = 0 (HCUP, 2022).

Mental illness. "An illness with psychologic or behavioral manifestations and/ or impairment in functioning due to a social, psychologic, genetic, physical/chemical, or biologic disturbance. The disorder is not limited to relations between the person and society. The illness is characterized by symptoms and/ or impairment in functioning" (Werner et al., 1984, p. 89).

Next-level Access to Care. The severity of work necessary to diagnose, care for, treat, and maintain an individual's mental, emotional, or physical condition. The levels of care will be divided into classes of primary, secondary, tertiary, and quaternary care; relevant to the intricacies of the psychiatric or medical conditions treated. Also, the skills, specialties, and discipline of the clinicians or providers.

Readmissions. Readmissions are defined as a subsequent hospital admission within 30 days after the initial stay.

Readmission Rates. Percentage of admitted patients who return to the hospital within 30 days of discharge.

Readmission Status. The patient was admitted, or the patient was not admitted, yes or no.

Rural. Non-metropolitan areas containing a population of < 50,000, including both micropolitan areas, with urban cluster populations of 10,000 to 50,000, and counties without an urban core i.e., non-core counties.

Serious Mental Illness. Serious mental illness (SMI) describes a mental illness often incapacitating, delineating conditions according to their chronicity and the severity of care needed from mental health services. Per SMI, diagnoses presented in the DSM-5 generally consist of schizophrenia and other associated psychotic disorders or diseases (i.e., schizoaffective disorders), bipolar disorder, and major depressive disorder. These disorders can engender impairment and deterioration in the quality of life consistent with that considered as "serious" (Goldhagen & Davidtz, 2021; Sisti, 2010).

State-owned Behavioral Health Hospitals. Behavioral health hospitals or institutions belonging to, funded by, and controlled by the government.

Trans-institutionalization. For the purpose of this study. A process where institutionalized mentally ill patients are discharged and simultaneously found in prisons often referred to as the 1939 Penrose Hypothesis, the number of inpatient psychiatric beds correlates to the rise in the prison population (Schildbach & Schildbach, 2018).

Assumptions

A couple of assumptions occurred preceding the implementation of this study. Assumptions exist concerning the study method and study design. A quantitative research method, using secondary data is conducted in this study (Walden University, 2020). Secondary data is second-hand data someone else collected primarily and made available privately or publicly for use, making it susceptible initially to bias (Rudestam & Newton, 2015). An assumption was made regarding data authenticity; the data was not tailored specifically for this study, which leaves room for subjectivity and prejudice. An assumption was also made of the validity of data accuracy; second-hand data carries the propensity for error.

Correlational research aims to examine the scope of divergence in one variable related to dissimilarities in one or more other variables (Curtis et al., 2015; Leedy & Ormrod, 2010). A correlation exists when one variable (X) increases and one more variable (Y) increases or decreases. A coefficient of 0.00 means no relationship between the variables examined (Curtis et al., 2015). An assumption was made regarding the

research design's ability to show which variable has the most influence; correlation does not mean causation when utilizing this design (Creswell & Creswell, 2018).

Scope and Delimitations

The scope and delimitations explain the boundaries of a study (Roberts, 2010). The boundaries are further limitations actively put in place to manage factors that can affect the results or focus precisely on the problem (Terrel, 2015).

This study's scope is to determine if there is a relationship between state-owned inpatient behavioral health patients, discharge disposition, rural access, and state-owned inpatient behavioral health hospital readmission rates. The literature and secondary data are delimitated to represent the variables specific to this study (Creswell, 2018). The delimitations include state-owned inpatient behavioral health high-risk patients, discharge disposition, rural access, and readmission rates in 2018. This study is generalizable and can evaluate other state-owned inpatient behavioral health high-risk patients from state-owned inpatient behavioral health hospitals, readmission rates by HCUP. HCUP (2020) collected the data used for this study in 2018.

Limitations exist; the study addressed state-owned inpatient behavioral health high-risk patients within rural areas, not conventional medical services unrelated to behavioral health conditions, diseases, and disorders.

Significance, Summary, and Conclusion

This study's significance may contribute to the inpatient behavioral healthcare delivery system by showing a potential correlation between the independent variables (i.e., state-owned inpatient behavioral health high-risk patients, discharge disposition

planning, and rural access.) and the dependent variable (i.e., readmission rates). Understanding the association amongst the variables may substantiate the theory that readmissions in state-owned behavioral health inpatient hospitals, to some extent, may prevent an unbalance in the staff-to-patient ratio. Avoid risk management issues (i.e., violence amongst patients and staff) and financial penalties (i.e., HRRP). Comprehensive discharge planning may help in the reduction of readmission rates. Researching next-level access to care options in rural areas should show hospital administrators and policymakers a need for more residential treatment options for high-risk individuals following an inpatient stay to secure a safe and viable environment for SMI patients (Mooney, 2019; Reif et al., 2017). Fixing the readmission problem regarding the improper transition to care models could alleviate quality of care concerns and decrease the 'revolving door' effect, adding accountability to the behavioral healthcare delivery system (Behavioral Health Care and Human Services, 2020; Ramey et al., 2016; SAMSHA, 2021; Upadhyay et al., 2019). Estimates predict that 5.2% or 13.1 million SMI adults ages 18 or older received mental health services nationwide (SAMSHA, 2019). The economic impact of SMI patients carries an estimated expenditure of $300 billion annually (SAMSHA, 2020). The deinstitutionalization movement has left the state government with having few to no long-term inpatient beds, and too many high-risk or SMI patients in community-based outpatient programs unequipped to take care of them, causing increased readmissions (Geller, 2000; Mooney, 2019; Sharfstein et al., 2009). The implications for positive social change include extended inpatient cost-effective

treatments, community-based next-level access to care, and resources sufficient for SMI individuals in rural areas (Graves, 2020; Helmicki, 2017; Ortiz, 2019; Richey, 2018).

Based on the literature review, there is a gap in research that directly correlates inadequate discharge planning, an internal factor, with a lack of next level of care, an external factor; to increase readmissions within state-owned inpatient behavioral health hospitals (Holdsworth et al., 2015; Kalseth et al., 2016; Long et al., 2017; Smeets et al., 2020; Warhol et al., 2019). There is a lack of knowledge involving potential quality improvement resolutions within state-owned inpatient behavioral health hospitals that could assist in the decline of readmissions in the wake of an updated discharge planning process. By cultivating a comprehensive discharge plan structured for high-risk behavioral health patients via strategic quality improvement initiatives, hospital administrators, as well as the behavioral health delivery system, have an outlined protocol to properly transition high-risk patients safely into the next level of access to care in rural areas (Graves, 2020; Ortiz, 2019; Reif et al., 2017; Richey, 2018).

Section 2: Research Design and Data Collection

The purpose of this correlational quantitative research study was to determine to what extent, if any, there is a relationship between the independent variable's discharge disposition, rural access, and the dependent variable readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. Depending upon the level of correlation, hospital administrators can establish preventative measures to decrease readmissions, starting with optimizing a comprehensive discharge disposition plan while increasing quality for patients with mental health conditions (Reese et al., 2018). Integrating hospital and next-level outpatient services is essential to reducing readmissions (Silow-Carroll et al., 2020). This study may show the need for, and significance of specialized inpatient behavioral health services designed for vulnerable high-risk individuals with heterogeneous needs, providing healthcare administrators with the data to support those services' expansions.

This section contains the research design and research method for this study and the research design and research method's suitability. Furthermore, this section also explains the population, data collection, instrumentation and operationalization, data analysis, threats to validity, and ethical procedures.

Research Design and Rationale

This correlational quantitative research study determines to what extent, if any, there is a statistical relationship between the independent variable's discharge disposition, rural access, and the dependent variable readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

Utilizing a correlational study design with a quantitative approach is suitable for the study to examine if a relationship exists between the independent and dependent variables of the study. Secondary data may establish an association between the variables according to the guidelines outlined by Omair (2015). The design was a correlational design, which is a nonexperimental design process. Correlational studies benefit from the quick and inexpensive (e.g., save years and thousands to millions of dollars to collect) access to secondary data obtained from various sources and readily available. However, there is a possibility that any association revealed in the correlational study may be due to other fundamental factors instead of the variables investigated (Omair, 2015).

Correlational studies contrast international and national, extensive data (e.g., large governmental databases [greater external validity] and hospital-based databases; Omair, 2015). The disadvantages of secondary data include a completed data collection, which may not facilitate the researcher's intended research questions. Information regarding the data collection procedures and study design may be limited.

Methodology

The study's data provides the information for a quantitative review of a portion of the behavioral health patient population. A thorough analysis of the population, the sample size, and a discussion of the sampling procedures used for the data collection process follows. A discussion of instrumentation and operationalization of the constructs exists. Also included is an interpretation of the data analysis process using a correlational design.

Population

Individuals identified from the population for the study participant sample were state-owned inpatient behavioral health patients, consumers of government assistance between 2018—government, non-federal (public); private, not-for-profit (voluntary); and private, investor-owned (proprietary). Included was data from high-risk SMI patients with mental illness and substance abuse disorders—secondary data collected by the NRD, which is part of a group of databases and software tools developed for the HCUP. The NRD is drawn from HCUP State Inpatient Databases (SID) that contain reliable, verified patient linkage numbers that can be used to track a person across hospitals within a state. The NRD is a special and dynamic database developed to support various types of analyses of national readmissions for all patients, regardless of the expected payer for the hospital stay (Healthcare Cost and Utilization Project, 2022). This database addresses a large gap in healthcare data—the lack of nationally representative information on hospital readmissions for all ages. Unweighted, the NRD contains data from approximately 18 million discharges each year. Weighted, it estimates roughly 35 million discharges. Developed through a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality, HCUP data inform decision making at the national, State, and community levels (Healthcare Cost and Utilization Project, 2022). The 2018 NRD were used to generate state estimates of readmissions by aggregating acute care hospitalizations.

Sample and Sampling Procedures

Sample Size

The population under study was limited to define that others were not included consisted of state-owned inpatient behavioral health patients—government, non-federal (public); private, not-for-profit (voluntary); and private, investor-owned (proprietary). The sampling for the data sets was compiled of a population where national estimates of readmissions were extracted from the HCUP 2018 NRD. The exclusion criteria were implemented to restructure the merged 2018 NRD data sets—the core, hospital, and severity; by removing those discharge records that were irrelevant to this study:

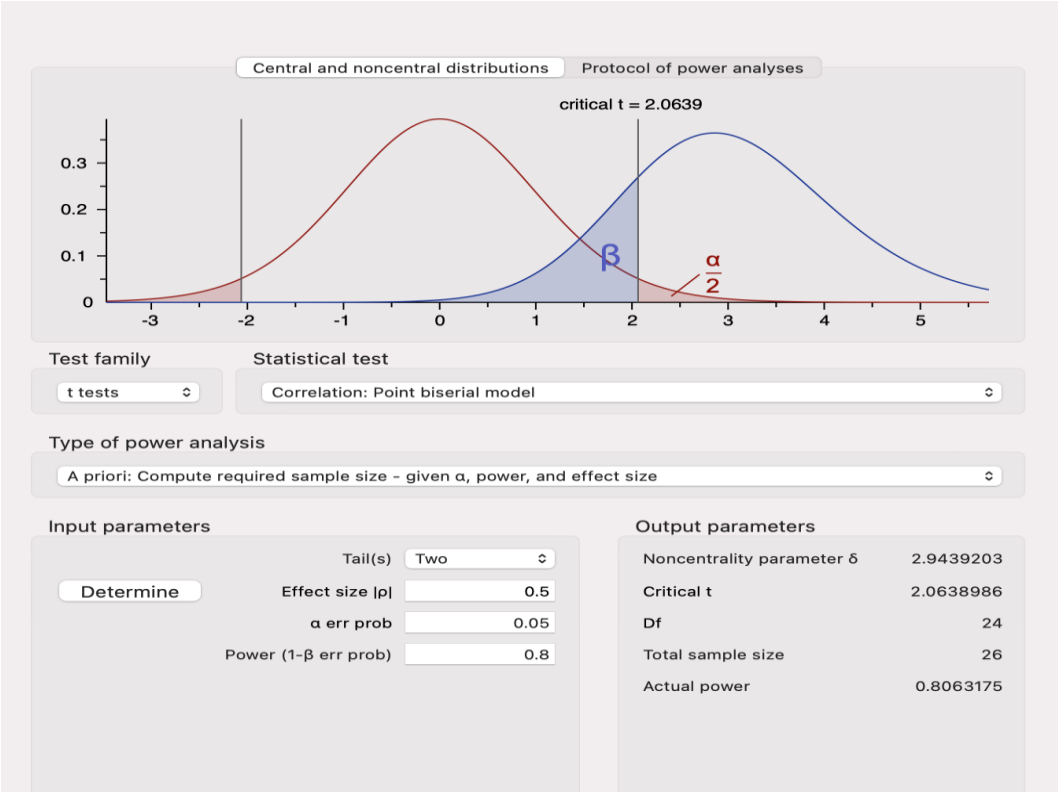
- Ages ≤ 0
- Days-to-Event ≤ 0
- DRG ungroupable 7,098
- Discharge Disposition
  - $\Rightarrow$ Against Medical Advice (AMA) 501,759.
  - $\Rightarrow$ Died in hospital 708,484.
  - $\Rightarrow$ Discharged alive destination unknown 8,032 (HCUP, 2022).

Determining an adequate sample size was contingent upon the size of the 2018 NRD data sets and proportion of the records excluded, it was logical to believe the number of records that met the inclusion criteria would be a sufficient sample size. The 2018 NRD consists of 17,686,511 unweighted discharge records. As a result of the inclusion and exclusion criteria, the sample represents a reduced sample of 463,533 discharges.

An a priori power analysis was suitable and executed for this study. A large effect size of f^2= 0.50 and power = 0.80 were used, an alpha level = 0.05, and a minimum total sample size of 26 was needed to meet the requirements of the study. Whereby, provoking further examination of the correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis with a CI of 95%. Figure 1 describe the G*Power analysis of the study.

Figure 1.

G*Power Analysis. G*Power Analysis Displaying Secondary Data Sample Size Met the Requirements and Parameters Needed



Data Collection

For this secondary data analysis, data were collected from the NRD database housed by HCUP, complementary of the Agency of Healthcare Research and Quality (AHRQ) through a Federal-State-Industry partnership to include all the components of the study variables. Permission for accessing the archival data is required in compliance of the following process. The NRD for data year 2018 were purchased online though the HCUP Central Distributor after proper registration to the website is complete. The HCUP Central Distributor is the entity that accepts, processes, and fulfills applications for the purchase and use of HCUP databases. I have completed the online HCUP Data Use Agreement Training, read, signed, and received the certificate of completion (i.e., HCUP-368H64FYV) for Nationwide Databases (PDF file, 260 KB: HTML). Responsibilities of the data purchaser must be read and agreed to; the Indemnification Clause and the Statement of Intended Use and Project Activities must also be completed to include a submission of the student's 250-word research abstract.

The study data are de-identified, and the data categories vary to include state-owned inpatient behavioral health high-risk patients, admission and discharge characteristics, readmission rates, LOS, behavioral health diagnoses, and demographic characteristics to include the National Center for Health Statistics urban/rural classification scheme for U.S. counties. To load and analyze the NRD data on a computer, a password was required provided by the HCUP Central Distributor after the purchase of the data, a hard drive with a minimum of 50 gigabytes (GB) of space

available, a third-party zip utility—ZIP Reader, 7-Zip, or WinZip, Secure Zip or Stuffit Expander, and SAS, SPSS, Stata, or similar analysis software.

The data collected were adequate to analyze with descriptive statistics (Creswell & Creswell, 2018). Implementation of informed consent processes necessitates public access. Utilizing government data sets provides the researcher with a standardized, legally mandated, unbiased reputable source of data and statistics from many institutions.

The data collection process also involved reorganization of the data to perform data analysis for this study. The formatted NRD data set had to be reconstructed where each discharge record existing independently on a single row was changed to show an individual in each row. Irrelevant variables were removed, and the revisit variables (visit link [encrypted patient identifier], days-to-event, and LOS-time between the admission/discharge of a record) were organized first as the ID and timing variables, which allows for the tracking of patients over time by utilizing a unique start date and admission date, permitting for the calculation of the time in-between visits; while staying within the boundaries of Health Insurance Portability and Accountability Act (HIPAA; HCUP, 2022). The labeling criterion used for readmissions in this study is 30-days. For example: if the interval between admission *Zb* and *Za* discharge in two visits is < 30 days, then visit *Za* is labeled a readmission, refer to Table 1 for further instructions where the patient has 5 visits. Between two visits, the tie interval is calculated as the 2nd NRD days-to-event minus the 1st NRD days-to-event and minus LOS. The result for Visit 2 and Visit 1 show 2163 – 2136 – 4 = 23, < 30 days, whereby labeling the visit a 1, which is a readmission visit. For Visit 3 and Visit 2, a difference show 2175 – 2163 – 3 = 9, < 30

days, labeling Visit 2 a 1, which is a readmission visit. For Visit 4 and 3 a difference show 2298 – 2175 – 6 = 117, >30 days, labeling visit 3 a 0, which is not a readmission visit. There are no more records showing a revisit to the hospital after the 5th visit, therefore, Visit 5 is also labeled as 0, not a readmission visit (HCUP, 2022; Wang & Zhu, 2022). To ascertain whether a readmission has satisfied the inclusion criteria by counting as a readmission, a categorical readmission variable was created for those records coded to revisit $\leq$ 30 days and those > 30 days. Additionally, a new dichotomous, categorical variable (Readmission Rates) was established to identify those readmissions following an index admission.

Table 1

Example to Label Patient Visit

Patient Visit link	Visit	NRD Days-To-Event	LOS (days)	Readmission Label
739148	1	2136	4	1
739148	2	2163	3	1
739148	3	2175	6	1
739148	4	2298	5	0
739148	5	2380	2	0

The NRD data set were restored back to its original format showing each discharge record once all inclusion and exclusion criteria had been applied and new recoded dichotomous categorical variables had been established (e.g., Readmission Rates). The 2018 NRD Core data set consists of variables DX1-DX25; ICD-10-CM codes used to identify discharge records showing a principle behavioral health diagnosis.

Independently, each discharge record was categorized as a readmission or non-readmission, whereas a new dichotomous, categorical variable were established

(readmissions within 30 days, readmission > 30 days, and no readmission) per the inclusion and exclusion criteria.

Inclusion and Exclusion Criteria

Key characteristics of the target population to answer the research questions involve inclusion criteria (Patino & Ferreira, 2018). The target population is inpatient behavioral health patients of all backgrounds, socioeconomic status, race, gender, ethnicities, and ages $\geq$ 1. Individuals included was consumers of state government services, hospitalized for inpatient psychiatric treatment, and with co-occurring mental health and substance abuse diagnoses. Data selected for this study include those patients who received inpatient behavioral health treatment in rural areas throughout the year or 2018. The primary diagnosis of mental illness and substance use disorders were identified by ICD-10 clinical modification (CM) diagnosis codes documented in the patient's record as DX1. This study also included adults and children who meet the federal definition of SMI and serious emotional disturbances (SED). Individuals selected in the study sample was inpatient behavioral health patients insured through Medicare and Medicaid.

Individuals excluded from the study include ages < 1, records for patients aged 0 years are excluded from about half of the SID in the 2018 NRD, the weights for these discharges were higher than other discharges (HCUP, 2022). Outpatient behavioral health patients only, those with conventional medical conditions only, private inpatient behavioral health patients, 23-hour observation, and non-admit behavioral health patients. Individuals also excluded from the study include those prisoners that have never received

a court order for psychiatric evaluation from a state-owned inpatient behavioral health institution. The missing, unverified, and questionable discharges of 20 or more Visit link identifiers are excluded, this variable is required to track the patients from admission to admission, if no identifier exists; the patient cannot be tracked for admission. The individual's gender and birth date were utilized as qualifying information to verify the encrypted unique patient ID numbers (visit link) provided to HCUP. For example: Six records have the exact verified person number (visit link), but three records have the birth date and gender, while the other three records consist of dissimilar, however, consistent birth date and gender. The three records consisting of the same identifying information share one value of visit link, while the other three share a dissimilar value of visit link. Missing visit links is considered if any of the corresponding components is missing (i.e., birth date, gender, and verified person number) or 40 plus hospitalizations occurred within a calendar year with similar qualifying information (HCUP, 2022).

The missing Days-To-Event and LOS are excluded, these variables are required for the calculation needed to ascertain readmissions occurring within 30-days of the index admission, therefore, the time between discharge and readmission cannot be calculated. Scheduled readmissions were excluded from readmissions due to the unique nature of the event, not a readmission, which aligns with established readmission measures (Barrett et al., 2012). Index events in which the patient died in the hospital were excluded because the risk of readmission does not exist (HCUP, 2022). Individuals discharged Against Medical Advice (AMA) was excluded, this involves patients who voluntarily discharged

themselves against the inpatient clinical care devised by the physician, HCUP treat these patients as outliers, removing them from readmission research.

Power Analysis

A power analysis can help a researcher determine an adequate sample size to increase the study's significance and the effect size (Creswell & Creswell, 2018). Neglecting to determine an adequate sample size may result in Type II errors and inaccurate results (Singleton, 2020). The natural assumption is that the alternative hypothesis will be true, and the null hypothesis will be false. The number of participants needed to test a hypothesis depends upon the level at which the null hypothesis is false; on the contrary, the sample size is relative to the fallacy of the null hypothesis. Utilizing power analysis for this study is to use power for the appropriateness of the correlational model. The plan is to measure the sample size, whereas the null hypothesis of the population multiple correlation coefficients equaling zero may reject accurately with precise probability (Singleton, 2020). Free software created to calculate power and sample size calculations, G*Power 3.1 was used to analyze power (Faul et al., 2009). The power analysis included the test family z-test, a graph showing the sampling distribution, a blue line; the population distribution represented by a solid red line; a red shaded area delineating the probability of a type 1 error; a blue area the type 2 error; and a solid black thin line evocating the critical points z (as shown in Figure 2). A statistical test correlation point biserial model, binary logistic regression: fixed test, R2 increase, and the type of power analysis, A Priori, to compute an adequate sample size. The analysis provided the following input information: effect Size: f2 = (0.45), power = 0.8, total

number of predictors = 4, alpha Level = 0.05, and total Sample Size = (3070), as shown in Figure 3.

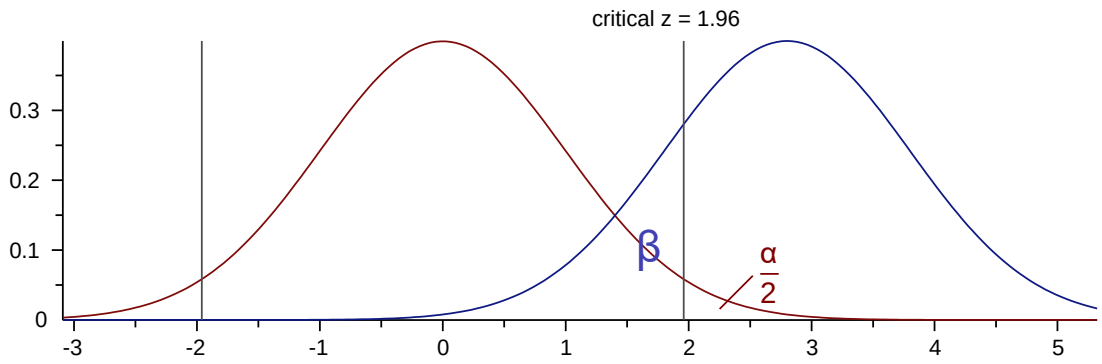


Figure 2. A graph showing the sampling distribution.

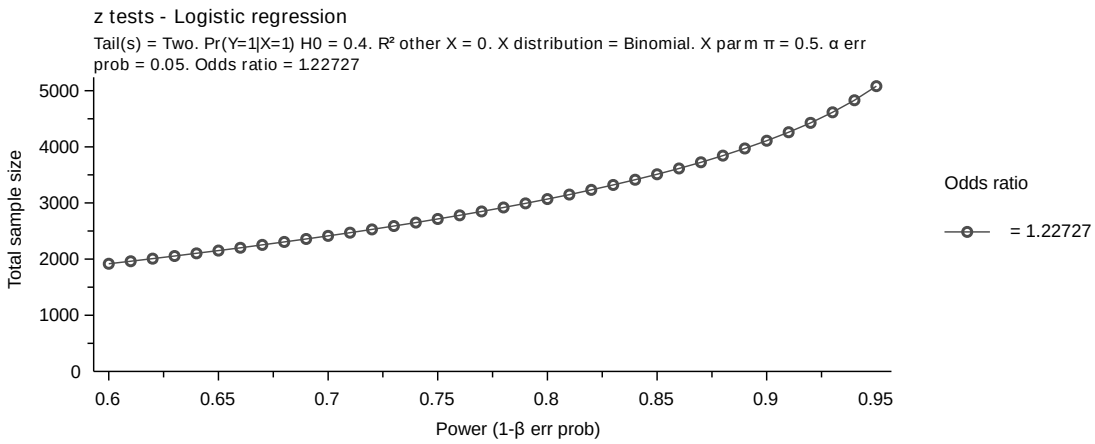


Figure 3. A graph showing power and sample size.

High power noted within a study indicates the probability of a true effect, which is why the suggested minimal power size is 80% (Faul et al., 2007). Establishing the sample size depends on several factors, according to Olejnik (1984): the statistical significance benchmark, degree of statistical power, methods for performing statistical analysis, and meaningful effect size. The alpha level of .05 in social science depicts a

standard, and adequate level of significance, such as the statistical power between .80 and .90 would be adequate levels of statistical power (Olejnik, 1984). The recommended sample size is (3070); however, a larger sample size increases the study's significance and effect size. Large sample size is available via the HCUP data set; the archival data files have 2018—17,686,511 unweighted, 35,460,557 weighted samples; therefore, I used 463,533.

Acquiring enough power does two things, it ensures relevant significant effects and plays a considerable part in the reproduction of findings, which may be a false positive, rejecting the null hypothesis when the null hypothesis is true (Fraley & Vazire, 2014).

Instrumentation and Operationalization of Constructs

Instruments

A measurement instrument to conduct data for this research study was not required. A data set of archival data suffices to examine the research questions. The data set obtained consists of data to display the study's dependent variable and three of the study's independent variables. The data is adequate in substance and size to accomplish the conditions of the correlational research design. SPSS software, version 28 was used for analysis in this research study.

Operationalization

State-Owned Inpatient Behavioral Health High-Risk Patients

State-Owned inpatient behavioral health high-risk patients' operational definition consists of comprehensive treatment requiring inpatient care for persons who have

serious mental illness or disorders and addictive diseases. Behavioral health or psychiatric hospitals are facilities licensed and operated as state/public behavioral health or psychiatric hospitals or state-licensed private psychiatric hospitals that primarily provide 24-hour inpatient care to persons with mental illness or addictive diseases. Also, state/public behavioral health or psychiatric facilities may provide 24-hour residential care or less-than 24-hour care (i.e., outpatient, partial hospitalization/day treatment), but these additional service settings are not requirements (SAMHSA, 2021). Behavioral health is a general term "used to refer to both mental health and substance use" (SAMHSA, 2021).

Service setting status refers to the type of behavioral health treatment setting(s) in which the patient received services during the reporting period. State behavioral health or psychiatric hospitals serve as SMHA-funded and operated HSOs functioning as hospitals that provide primary inpatient care to individuals with behavioral health disorders or illnesses from a designated geographical area or statewide (SAMHSA, 2021).

Readmission Rates

Readmission rates is operationally defined as a psychiatric or behavioral health patient readmitted back into an acute care psychiatric or behavioral health hospital after a discharge from an index admission within 30 or more than 30 days for the same condition, disease, illness, or disorder.

Discharge Disposition

Discharge Disposition is operationally defined as the final place, residence, or setting to which the patient transition on the day of discharge and was utilized as dummy variables for regression analysis:

- Homeless describes clients with no fixed address; includes shelters.
- Dependent living describes clients living in a supervised setting such as a residential institution, halfway house, or group home, and children (under age 18) living with parents, relatives, or guardians or in foster care.
- Independent living describes clients living alone or with others without supervision.
- Unknown (SAMHSA, 2021).

Rural Access

According to the 2018 HCUP, rural access areas operational definition is nonmetro counties with a population of fewer than 2,500 in urbanized areas are classified as "completely rural." The terms "urbanized," "less urbanized," and "completely rural" for counties are not based on the relative proportion of the county population in urbanized areas but rather on the absolute size of the population in urbanized areas and was utilized in the analyses.

Length of Stay

The length of stay is operationally defined as calculated by subtracting the admission date from the discharge date (HCUP, 2022).

Diagnosis

The diagnosis is operationally defined as the first listed diagnosis, the principal diagnosis described as the condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care (HCUP, 2022).

Data Analysis Plan

This quantitative research study measures the relationships between discharge disposition, rural access, and odds of readmissions among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. SPSS version 28 was used for analysis of this research study. The statistical analyses appropriate for this study consists of Descriptive statistics and Binary Logistic Regression.

The retrieval of archival data from HCUP satisfies the requirements of this study. Historical data consists of data collected before the beginning of the research study (Fallon, 2019). The secondary analysis of current data is an infamous method of improving the effectiveness of health research (Trinh, 2018).

Government data, in general is clear of corrupt and inaccurate information and does not need data cleaning or screening (Ilyas & Chu, 2019). However, secondary data is data primarily collected for the purpose of another researchers' study and must undergo extensive restructuring to meet the data scope of the current researcher's analyses plan. Data cleaning techniques and procedures for this study consisted of data transformation, data deduplication, outlier detection, and error repair, including imputing missing values with the intent to improve data quality.

Typographical errors were fixed or removed due to downloading and merging three data sets together—2018 NRD core, hospital, and severity. Duplicate observations were checked even though the data sets consisted of unique patient IDs, it was not unusual for readmission data sets to repeat cases for the same patient ID, however with different revisit variables i.e., days-to-event and LOS. Irrelevant observations were removed or unselected via the data selection if command procedure to exclude those data points that does not fit the specific scope of the problem and research questions. Recoding categorical data require the researcher to correct grammatical errors when creating values and rephrasing long headings. The model performance was improved by filtering outliers. Missing data were either dropped from the data set or handled by creating a missing category or imputing a numeric value into the missing values section in the variable view of the data set.

Analysis Plan for Research Questions and Hypotheses

RQ1: To what extent, if any, is there a correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis?

H1: There is a correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis?

H_o1: There is no correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis?

Analysis Plan for Logistic Regression

The research question addresses whether there is a relationship between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. Statistical analysis involved the use of a descriptive and logistic regression analysis.

To examine the research question, a binary logistic regression was conducted to assess if the state-owned inpatient behavioral health high-risk patients, discharge disposition, and rural access predict the readmission rates. The binary logistic regression is an appropriate statistical analysis when the purpose of research is to assess if a set of predictor variables predict a dichotomous dependent variable (Pituch & Stevens, 2015). The dependent variable in binary logistic regression is represented as the natural logarithm of the odds ratio for membership in one of the response categories, which can be modeled as a linear function of the predictors.

Binary logistic regression assumes an absence of multicollinearity among the independent variables, which was assessed by calculating variance inflation factors (VIF). A predictor with a VIF value of 10 or more was reported as having high multicollinearity (Menard, 2009).

Model significance was determined using a χ^2 omnibus test. McFadden's R^2 was examined to estimate the overall variance in the outcome that can be accounted for by the predictors. The coefficients were interpreted by calculating the exponential (e^B), also known as odds ratio coefficients. The categorical variables were recoded as dummy variables for regression analysis.

Threats to Validity

Validity measures how well an experiment or test accomplishes the degree of accuracy it claims to make (Hawkins et al., 2018). Validity determines if the operational definition of a variable mirrors the true logical intentions of a theory (Duke et al., 2020). Detailed below is a discussion on external validity, internal validity, and threat to potential statistical conclusions.

External Validity

External validity ascertains the generalizability of the results to a larger population base or circumstances outside of the parameters of the sample itself (Terrell, 2016). External validity includes cooperation or communication involving the organic relationship associated with treatment modifications or differences (Petursdottir & Carr, 2018). Researchers should ensure that the sample represents the population to improve external validity (McEwan, 2020). This study is generalizable across states according to the laws of that state regarding government behavioral health hospitals', as they may be different from state-to-state according to the legislation and regulations relative to the population of people with substance disorders and mental illness.

Internal Validity

Internal validity focuses on the study's outcome as it relates to the independent variable and is not attributable to outside confounding factors or other variables that may affect the accuracy of the results. Whereby establishing internal validity to the highest degree. Reducing the risk within the study may aid in diminishing internal validity threats. Since in this correlational study, non-experimental design, variables are not

manipulated or controlled. Therefore, threats to internal validity do not apply (Dunbar-Jacob, 2018). Evaluating a causal relationship is not the goal of this study.

Statistical Conclusion Validity

In addition to external and internal validity threats, statistical conclusion validity requires thorough evaluation when considering the confidence of inferences regarding assumed covariation of variables at a defined p-value and variance (Cook & Campbell, 1979).

Factors associated with the Type I error rate include threats to statistical conclusion validity (Garcia-Perez, 2012). The sample size used in this study is adequate due to a large sample from secondary data; therefore, the threat regarding an inadequate sample size is non-existent. I administered a power analysis that revealed a minimum power of 107, which exceeds the 0.80 minimum standard (Cohen, 1988).

Alpha reduction procedures and multiple comparisons was not conducted in this study to avoid fishing and p-hacking. False acceptance of the null hypothesis did not occur within this study due to a sufficient power level and sample size, thereby avoiding a Type II error. Reliability issues do not exist, measurement instruments and treatment implementation did not apply. Typical assumptions for a test, e.g., regression, expect a linear correlation between the predictor and outcome variables. A correlation exists if the plots gather in a straight line, and the assumption was met (Verma et al., 2019).

I ascertained no threats to the data sets, accessible from following a structured process outlined to ensure confidentiality from HCUP (2020) website.

Ethical Procedures

This study excluded experimentation on human participants and only use archival review of secondary data collected from a public database, HCUP (Tripathy, 2013). All data included is deidentified and devoid of patient names, birth dates, social security numbers, or medical record numbers (MRN) within any secondary data utilized.

During every aspect of a study, researchers must account for all ethical concerns (Goodwin et al., 2020). Walden University expects doctoral students to acquire training and practices that safeguard human research participants and receive IRB approval before the process of data collection. Interaction with participants did not occur during this study. Informed consent did not apply during the data collection process because it did not entail conducting surveys or interviews.

Conflict of interest occurs when the professional responsibility of an individual interferes with the personal concerns or interest of that individual, as it may bias behavior. The possibility of bias creates significance in conflict of interest. Respondent bias does not apply to this study because of secondary data and not data acquired through surveys or interviews. The IRB approval number is 05-20-22-0756278.

Transition and Summary

The purpose of this quantitative correlation research is to determine to what extent, if any, a correlation exists between the independent variables state-owned inpatient behavioral health high-risk patients, discharge disposition, rural access, and the dependent variable readmission rates. Depending on the level of correlation discovered in this research, hospital administrators may find that the results can help them establish

preventive measures to decrease readmissions, starting with optimizing a comprehensive discharge disposition process while increasing quality care for high-risk patients with mental health conditions in rural areas. Integrating hospital and next-level outpatient services is essential to reducing readmissions (Silow-Carroll et al., 2020).

The target population for this study includes SMI behavioral health patients from state-owned inpatient behavioral health hospitals in rural areas. Data was retrieved from HCUP. Multiple logistic regression is the statistical analysis used to answer the research questions. The implication for positive social change includes addressing behavioral health high-risk individuals' recovery needs and the opioid epidemic in rural areas. The implication for positive social change may show the need for, and significance, of specialized inpatient behavioral health services designed for vulnerable high-risk individuals with heterogeneous needs and may provide healthcare administrators with evidence to support expansions of those services. Confirming the cause of increased readmissions for high-risk inpatient behavioral health patients in rural areas may lower treatment costs and resolve quality of care problems caused by a lack of next-level access to proper transition care services.

Section 3: Presentation of the Results and Findings

The purpose of this quantitative correlational research was to examine readmissions within government behavioral health facilities in rural areas. In this study, I assessed if there was a relationship between the independent variables discharge disposition; the final place, residence, or setting to which the patient transitioned on the day of discharge, rural access; nonmetro counties with a population of fewer than 2,500 in urbanized areas classified as "completely rural," and the dependent variable readmission rates; a psychiatric or behavioral health high-risk patient readmitted back into an acute care psychiatric or behavioral health hospital after a discharge from an index admission within 30 or more than 30 days for the same condition, disease, illness, or disorder.

Secondary data were used, and a logistic regression statistical analysis was used to answer the study's research question. The research question and hypotheses were tested to determine the correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. The null hypothesis determines that there is no correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis, while the alternative hypothesis determines that there is a correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

In Section 3, I introduce and discuss the outcome of the study. Section 3 includes the proceeding subsections: (a) synopsis of the study, (b) presentation of findings, (c) data collection of secondary data set, (d) results, and (e) summary. Depending on the outcome of the data analysis, the null hypotheses were, whereby answering the research question.

Data Collection of Secondary Data Set

The 2018 NRD secondary data from HCUP Central Distributor were used for this study. The NRD is a publicly accessible database of all-payer hospital inpatient stays, which may be used to extract national estimates of readmissions. The NRD is taken from HCUP SID consisting of verified patient linkage numbers which may be used to track a person across hospitals within a state, while abiding by the HIPAA Privacy Rule (Agency for Healthcare Research and Quality, 2022). Unweighted, the NRD include data from nearly 18 million discharges a year. Weighted, it projects 35 million discharges within the United States population. The NRD is accessible for data years 2010-2019. Users must complete the HCUP Data Use Agreement Training Course before receiving the data (Agency for Healthcare Research and Quality, 2022).

The National Data Use Agreement was upheld, the Indemnification Clause was read and agreed to, however, the Statement of Intended Use and Project Activities was not required due to the verified student status and a submission of the student's 250-word research abstract was not needed for the purchase of the national database.

The HCUP cost-to-charge ratio (CCR) data set was included as a bonus for the purchase of the NRD data set. The application of the CCR relative to total charges billed

by the hospital for ED visits or inpatient discharges, provides estimates from hospital service delivery costs such as supplies, utility, and wage expense, which is unique in regard to the normal hospital expenditures.

These hospital-level files house supplementary data elements from the inpatient and emergency department databases.

The HCUP use the term "revisit" to describe supplemental variables rather than "readmission." The term revisit suggests numerous episodes of care for a specific patient, not restricted to inpatient stays. The NRD revisit variables enhance the usual readmission analyses by making it possible to examine numerous patient visits to the hospital, despite the setting of care. The supplemental variables allow patients to be tracked across hospital admissions after an outpatient episode of multiple emergency department or ambulatory surgery visits, which can occur for various causes, distinguished by days or years, representing the same patient. The NRD revisit variables consists of the visit link days-to-event, and LOS data elements.

The data was compiled into SPSS from four different data sets drawn from the HCUP NRD.

The secondary data analyses used data collected by HCUP, consisting of four data sets from calendar file 2018, one hospital-level and three discharge-level separate files. The hospital file presents data on hospital characteristics with a population of N = 2,430 (2018). The core file uses data elements such as discharge status, age, total charges, expected primary payer, and ICD-10-CM/PCS codes N = 17,686,511 (2018). The severity file involves data elements that reveal the severity of the condition for a

particular discharge N = 17,686,511 (2018). Diagnosis and Procedure Groups file contain further ICD-10-CM diagnoses and ICD-10-PCS procedures established by AHRQ software tools N = 17,686,511 (2018). Inclusive data elements acquired from the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses. Also included in the file, the Elixhauser Comorbidity Software Refined for ICD-10-CM, the CCSR for ICD-10-PCS procedures, and Procedure Classes Refined for ICD-10-CM (Agency for Healthcare Research and Quality, 2022).

Study Demographic Characteristics

Patients considered within the study demographic characteristic parameters were those ages 1-90; 91 and greater were set to 90. The same patient linkage number was used to impute the missing age (i.e., 145 for 2018 discharges).

Sex was coded within the study as (0) male, (1) female. The same patient linkage number was used to impute the missing sex (i.e., 51 for 2018 discharges).

Patient residence, the urban and rural locations according to the National Center for Health Statistics (NCHS) were classified within the United States as follow:

- Central counties of metro areas of >= 1 million population.
- Fringe counties of metro areas of >= 1 million population.
- Counties in metro areas of 250,000-999,999 population.
- Counties in metro areas of 50,000-249,999 population.
- Micropolitan counties. Not metropolitan or micropolitan counties (Agency for Healthcare Research and Quality, 2022).

Results

The results section presents the analyzed data and the findings as it relates to the research study. The primary result of the study explains the answer to the hypothesis tested. A review of the data and an explanation of the analysis executed were presented. The use of tables reflects the output produced by the analyses. This section summarizes a description of the sample and detailed hypothesis testing. Section 4 includes an overall discussion of the interpretations of the findings, limitations of the study, recommendations, implications for professional practice and social change, and conclusion.

Descriptive

Introduction

Summary statistics were calculated for each interval and ratio variable, and frequencies and percentages were calculated for each nominal variable split by *Readmission Rates*.

Results

Frequencies and Percentages

The most frequently observed category of *Patient Location* within the *Readmissions greater than 30-days* category of *Readmission Rates* was *"Central" counties of metro areas of >=million population* (*n* = 62,200, 33.13%). The most frequently observed category of *Patient Location* within the *Readmissions within 30-days* category of *Readmission Rates* was *"Central" counties of metro areas of >=million population* (*n* = 14,949, 33.54%). The most frequently observed category of *Readmission*

Rates within the *Readmissions greater than 30-days* category of *Readmission Rates* was *Readmissions greater than 30-days* (*n* = 187,750, 100.00%). The most frequently observed category of *Readmission Rates* within the *Readmissions within 30-days* category of *Readmission Rates* was *Readmissions within 30-days* (*n* = 44,567, 100.00%). The most frequently observed category of *Hospital Control* within the *Readmissions greater than 30-days* category of *Readmission Rates* was *Private, not-for-profit (voluntary)* (*n* = 122,832, 65.42%). The most frequently observed category of *Hospital Control* within the *Readmissions within 30-days* category of *Readmission Rates* was *Private, not-for-profit (voluntary)* (*n* = 28,386, 63.69%). The most frequently observed category of *Diagnosis* within the *Readmissions greater than 30-days* category of *Readmission Rates* was *High-Risk Behavioral Health Diagnosis* (*n* = 179,353, 95.53%). The most frequently observed category of *Diagnosis* within the *Readmissions within 30-days* category of *Readmission Rates* was *High-Risk Behavioral Health Diagnosis* (*n* = 42,348, 95.02%). The most frequently observed category of *Discharge Disposition* within the *Readmissions greater than 30-days* category of *Readmission Rates* was *Discharged to home or self-care* (*n* = 159,776, 85.10%). The most frequently observed category of *Discharge Disposition* within the *Readmissions within 30-days* category of *Readmission Rates* was *Discharged to home or self-care* (*n* = 37,880, 85.00%). Frequencies and percentages are presented in Table 2.

Table 2

Frequency Table for Nominal Variables

Variable	Readmissions greater than 30-days	Readmissions within 30-days
Patient Location		
"Central" counties of metro areas of >=million population	62200 (33.13%)	14949 (33.54%)
"Fringe" counties of metro areas of >=million population	45049 (23.99%)	10478 (23.51%)
Counties in metro areas of 250,000-999,999 population	39886 (21.24%)	9491 (21.30%)
Counties in metro areas of 50,000-249,999 population	18096 (9.64%)	4359 (9.78%)
Micropolitan counties	13936 (7.42%)	3322 (7.45%)
Not metropolitan or micropolitan counties	8583 (4.57%)	1968 (4.42%)
Missing	0 (0.00%)	0 (0.00%)
Total	187750 (100.00%)	44567 (100.00%)
Readmission Rates		
Readmissions greater than 30-days	187750 (100.00%)	0 (0.00%)
Readmissions within 30-days	0 (0.00%)	44567 (100.00%)
Missing	0 (0.00%)	0 (0.00%)
Total	187750 (100.00%)	44567 (100.00%)
Hospital Control		
Government, non-federal (public)	27365 (14.58%)	6635 (14.89%)
Private, not-for-profit (voluntary)	122832 (65.42%)	28386 (63.69%)
Private, investor-owner (proprietary)	37553 (20.00%)	9546 (21.42%)
Missing	0 (0.00%)	0 (0.00%)
Total	187750 (100.00%)	44567 (100.00%)
Diagnosis		
Behavioral Health Diagnosis	8397 (4.47%)	2219 (4.98%)
High-Risk Behavioral Health Diagnosis	179353 (95.53%)	42348 (95.02%)
Missing	0 (0.00%)	0 (0.00%)

Total	187750 (100.00%)	44567 (100.00%)
Discharge Disposition		
Discharged to home or self-care	159776 (85.10%)	37880 (85.00%)
Transfer: short-term hospital	1981 (1.06%)	617 (1.38%)
Transfer: other type of facility	20696 (11.02%)	4960 (11.13%)
Home health care	5297 (2.82%)	1110 (2.49%)
Missing	0 (0.00%)	0 (0.00%)
Total	187750 (100.00%)	44567 (100.00%)

Summary Statistics

For *Readmissions greater than 30-days*, the observations of *LOS* had an average of 8.11 (*SD* = 10.66, SE_M = 0.02, Min = 1.00, Max = 363.00, Skewness = 7.47, Kurtosis = 105.95). For *Readmissions within 30-days*, the observations of *LOS* had an average of 8.76 (*SD* = 11.90, SE_M = 0.06, Min = 1.00, Max = 320.00, Skewness = 7.64, Kurtosis = 104.25). When the skewness is greater than 2 in absolute value, the variable is asymmetrical about its mean. When the kurtosis is greater than or equal to 3, then the variable's distribution is markedly different than a normal distribution in its tendency to produce outliers (Westfall & Henning, 2013). The summary statistics can be found in Table 3.

Table 3

Summary Statistics Table for Interval and Ratio Variables by Readmission Rates

Variable	*M*	*SD*	*n*	SE_M	Min	Max	Skewness	Kurtosis
LOS								
Readmissions greater than 30-days	8.11	10.66	187750	0.02	1.00	363.00	7.47	105.95
Readmissions within 30-days	8.76	11.90	44567	0.06	1.00	320.00	7.64	104.25

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Binary Logistic Regression

Introduction

A binary logistic regression was conducted to examine whether *Patient Location, Hospital Control, LOS, Diagnosis,* and *Discharge Disposition* had a significant effect on the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates*. The reference category for *Readmission Rates* was *Readmissions within 30-days*.

Assumptions

The assumption of absence of multicollinearity was examined (Table 4). Absence of extreme outliers was examined, the casewise plot was not produced in the output because no outliers were found. The response variable only takes on two possible outcomes, dichotomous in nature. The sample size is sufficiently large due to the HCUP databases. The observations are independent of each other and do not come from repetitions of measurements or equal data. The independent variables are linearly related to the log odds.

Variance inflation factors. VIFs were calculated to detect the presence of multicollinearity between predictors. High VIFs indicate increased effects of multicollinearity in the model. VIFs greater than 5 are cause for concern, whereas VIFs of 10 should be considered the maximum upper limit (Menard, 2009). All predictors in the regression model have VIFs less than 10. Table 4 presents the VIF for each predictor in the model.

Table 4

Variance Inflation Factors for Patient Location, Hospital Control, LOS, Diagnosis, and Discharge Disposition

Variable	VIF
Patient Location	1.03
Hospital Control	1.03
LOS	1.04

Diagnosis	1.11
Discharge Disposition	1.14

Results

The model was evaluated based on an alpha of .05. The overall model was significant, $\chi^2(12) = 255.23$, $p < .001$, suggesting that *Patient Location, Hospital Control, LOS, Diagnosis,* and *Discharge Disposition* had a significant effect on the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates*. McFadden's R-squared was calculated to examine the model fit, where values greater than .2 are indicative of models with excellent fit (Louviere et al., 2000). The McFadden R-squared value calculated for this model was 0.00. The effect of the *"Fringe" counties of metro areas of >=million population* category of *Patient Location* was not significant, $B = 0.02$, OR = 1.02, $p = .094$, indicating that observing the *"Fringe" counties of metro areas of >=million population* category of *Patient Location* did not have a significant effect on the odds of observing the *Readmissions greater than 30-days category* of *Readmission Rates*. The effect of the Counties in metro areas of 250,000-999,999 population category of *Patient Location* was not significant, $B = -0.004$, OR = 1.00, $p = .768$, indicating that observing the *Counties in metro areas of 250,000-999,999 population* category of *Patient Location* did not have a significant effect on the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates*. The effect of the *Counties in metro areas of 50,000-249,999 population* category of *Patient Location* was not significant, $B = -0.02$, OR = 0.98, $p = .228$, indicating that observing the *Counties in metro areas of 50,000-249,999 population* category of *Patient Location* did not have a significant effect on the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates*. The effect of the *Micropolitan counties* category of *Patient Location* was not significant, $B = -0.003$, OR = 1.00, $p = .880$, indicating that observing the *Micropolitan counties* category of *Patient Location* did not have a

significant effect on the odds of observing the Readmissions greater than 30-days category of *Readmission Rates*. The effect of the *Not metropolitan or micropolitan counties* category of *Patient Location* was not significant, $B = 0.03$, OR = 1.03, $p = .199$, indicating that observing the *Not metropolitan or micropolitan counties* category of *Patient Location* did not have a significant effect on the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates*. The effect of the *Private, not-for-profit (voluntary)* category of *Hospital Control* was significant, $B = 0.04$, OR = 1.04, $p = .018$, indicating that observing the Private, not-for-profit (voluntary) category of *Hospital Control* increases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 3.69% relative to the *Government, non-federal (public)* category of *Hospital Control*. The effect of the *Private, investor-owner (proprietary)* category of *Hospital Control* was significant, $B = -0.06$, OR = 0.94, $p < .001$, indicating that observing the *Private, investor-owner (proprietary)* category of *Hospital Control* decreases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 6.20% relative to the *Government, non-federal (public*) category of *Hospital Control*. Those that are in a *Government, non-federal (public)* facility is less likely to be readmitted within 30-days, further; those patients in a *Private, investors-owned (proprietary)* are more likely to be readmitted within 30-days. The effect of the *LOS* was significant, $B = -0.005$, OR = 1.00, $p < .001$, indicating that a one-unit increase in *LOS* decrease the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 0%. The effect of the *High-Risk Behavioral Health Diagnosis* category of *Diagnosis* was significant, $B = 0.13$, OR = 1.14, $p < .001$, indicating that observing the *High-Risk Behavioral Health Diagnosis* category of *Diagnosis* increases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately14.17% relative to the *Behavioral Health Diagnosis* category of *Diagnosis*. The effect of the Transfer: short-term hospital category of *Discharge Disposition* was

significant, B = -0.24, OR = 0.79, $p < .001$, indicating that observing the *Transfer: short-term hospital* category of *Discharge Disposition* decreases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 21.38% relative to the *Discharged to home or self-care* category of *Discharge Disposition*. The effect of the *Transfer: other type of facility* category of *Discharge Disposition* was significant, B = 0.05, OR = 1.05, p = .005, indicating that observing the Transfer: other type of facility category of *Discharge Disposition* increases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 5.14% relative to the *Discharged to home or self-*care category of *Discharge Disposition*. The effect of the *Home health care* category of *Discharge Disposition* was significant, B = 0.16, OR = 1.17, $p < .001$, indicating that observing the *Home health care* category of *Discharge Disposition* increases the odds of observing the *Readmissions greater than 30-days* category of *Readmission Rates* by approximately 17.06% relative to the *Discharged to home or self-care* category of *Discharge Disposition*. Table 5 summarizes the results of the regression model.

Table 5: *Logistic Regression Results with Patient Location, Hospital Control, LOS, Diagnosis, and Discharge Disposition Predicting Readmission Rates*

Variable	*B*	*SE*	χ^2	*P*	*OR*	95.00% CI
(Intercept)	1.33	0.03	1,975.61	< .001	-	-
Patient Location "Fringe" counties of metro areas of >=million population	0.02	0.01	2.80	.094	1.02	[1.00, 1.05]
Patient Location Counties in metro areas of 250,000-999,999 population	-0.004	0.01	0.09	.768	1.00	[0.97, 1.02]
Patient Location Counties in metro areas of 50,000-249,999 population	-0.02	0.02	1.45	.228	0.98	[0.94, 1.01]

Patient Location Micropolitan counties	-0.003	0.02	0.02	.880	1.00	[0.96, 1.04]
Patient Location Not metropolitan or micropolitan counties	0.03	0.03	1.65	.199	1.03	[0.98, 1.09]
Hospital Control Private, not-for-profit (voluntary)	0.04	0.02	5.60	.018	1.04	[1.01, 1.07]
Hospital Control Private, investor-owner (proprietary)	-0.06	0.02	12.72	< .001	0.94	[0.91, 0.97]
LOS	-0.005	0.0004	126.09	< .001	1.00	[0.99, 1.00]
Diagnosis High-Risk Behavioral Health Diagnosis	0.13	0.03	26.40	< .001	1.14	[1.09, 1.20]
Discharge Disposition Transfer: short-term hospital	-0.24	0.05	26.63	< .001	0.79	[0.72, 0.86]
Discharge Disposition Transfer: other type of facility	0.05	0.02	7.93	.005	1.05	[1.02, 1.09]
Discharge Disposition Home health care	0.16	0.03	21.47	< .001	1.17	[1.10, 1.25]

Note. $\chi^2(12) = 255.23$, $p < .001$, McFadden $R^2 = 0.001$.

Summary

Section 3 presented the data collection of the secondary data set and the results for the statistical analyses conducted to answer the research question and hypotheses to determine the correlation between the independent variables, discharge disposition, rural access, and dependent variable readmission rates amongst the baseline predictor, ownership—government, non-federal (public); state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

The research question, RQ1, analysis determined that the null hypothesis, H_o1; was rejected. The overall model showed a statistically significant correlation between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis, due to the

significance of the analysis being less than .05 at. p <.001. However, the model resulted the IV rural access (patient location) not significant (p > .05).

Binary logistic regression was conducted to assess whether the 5 predictor variables, *Patient Location, Diagnoses, Hospital Control, Discharge Disposition, and LOS;* significantly predicted whether a readmission occurred more than 30 days or within 30 days. The overall model was significant, $\chi^2(12) = 255.23$, $p < .001$, McFadden $R^2 = 0.001$; suggesting that Patient Location, Diagnoses, Hospital Control, Discharge Disposition, and LOS had a significant effect on the odds of observing the Readmission more than 30 days category of Readmission Rates. McFadden's R-squared was calculated to examine the model fit, where values greater than .2 are indicative of models with excellent fit (Louviere et al., 2000). The McFadden R-squared value calculated for this model was 0.00.

Section 4: Application to Professional Practice and Implications for Social Change

Introduction

The focal point of this study was the relationship between discharge disposition, rural access, and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. The objective was to examine readmissions within government behavioral health facilities in rural areas, to bring awareness to behavioral health hospital administrators to establish preventive measures such as pre-discharge interventions, post-discharge interventions, bridging interventions, and quality improvement initiatives to reduce readmissions of state-owned inpatient behavioral health high-risk patients in rural areas. Employing a quantitative research study was appropriate for the statistical analysis of the data utilizing SPSS version 28 to ascertain if a correlation exists between the independent and dependent variables. This study offers new knowledge in the field of readmissions for hospital administrators within government behavioral health facilities in rural areas.

The 'revolving door' effect is occurring amongst behavioral health high-risk patients within local ED departments. Behavioral health patients are occupying beds that could otherwise be used by patients with medical emergencies. Involuntary psychiatric admissions often result from ED transfers to acute care behavioral health government facilities that provide only ultra-short stays that once again circle back to another 'revolving door' effect (Fulone et al., 2019, 2021; Morris et al., 2018;). Researchers have shown that >40% of patients in the ED have a behavioral health disorder diagnosis and more than 5% of every intake is primarily for psychiatric purposes and 60% are

characterized as moderate to serious in severity (Morris et al., 2018). Readmissions have affected all sectors of healthcare from a clinical perspective; nevertheless, they have not been heavily researched from an administrative perspective as it relates to government behavioral health facilities because of an eminent policy change i.e., deinstitutionalization, which represents a demand within the healthcare delivery system (Sergeren et al., 2022). Behavioral health readmissions, due to systemic factors such as a lack of adequate comprehensive discharge planning for high-risk behavioral health patients in rural areas, following an ultra-short inpatient stay, affects the local ED. The cost of readmissions negatively affects the hospital's economic health and reduces healthcare resources, which inadvertently, influences the quality of care (Sievers & Larson, 2020). For this study, the analysis of secondary data supported the examination of readmissions within government behavioral health facilities in rural areas.

Summary of Key Findings

To answer the research question, a binary logistic regression analysis was conducted on the independent variables discharge disposition, rural access, controlling for LOS, diagnosis, and the dependent variable readmission rates. The results of the binary logistic regression analysis suggest that the compilation of variables together, discharge disposition, rural access, LOS, diagnosis, and readmission rates, impact behavioral health readmissions. The discharge disposition: home health care was the most significant predictor variable that had the greatest impact on behavioral health readmissions. The discharge disposition: transfer to short-term hospital was the less significant predictor variable that had the least impact on behavioral health readmissions.

The binary logistic regression analysis output revealed that the null hypothesis was rejected as the level of prediction increased when the study's outcome variable was added to the baseline or null model. The initial model predicted that 81% of behavioral health patients were readmitted more than 30 days. The study's predictor variables were added to the full model and the prediction rate remained at 81%. While significant, the second model's cutoff value was set at 0.5 and no cases were moved to the next category, which resulted in a stagnated prediction rate of 81%. Despite the stagnation due to no change in the full model after the addition of the explanatory variables, there was an impact on behavioral health readmissions, therefore supporting the alternative hypothesis (Pallant, 2020). The prediction power of the model was not due to a sampling error, but more so improved due to the large sample size (Pallant, 2020). Furthermore, the omnibus tests of model coefficients were used to examine whether the full model with the predictor variables included, showed an improvement beyond the baseline or null model (Pallant, 2020). Chi-square tests were used to ascertain the significant contrast between the Log-likelihoods of the baseline or null model versus the full model with the explanatory variables (Pallant, 2020).

The study's predictor variables combined or independent showed a significant effect on behavioral health readmissions. The discharge disposition: home health care was the most significant predictor variable that had the greatest impact on behavioral health readmissions. The discharge disposition: transfer to short-term hospital was the less significant predictor variable that had the least impact on behavioral health readmissions.

Interpretation of the Findings

The outcome of this study confirmed and extends knowledge within the discipline of behavioral healthcare administration relative to hospital readmissions for high-risk behavioral health patients in rural areas. The model resulted the IV rural access (patient location) not significant ($p > .05$), however, the IV discharge disposition, hospital control, LOS, and diagnosis were found to be significant ($p < .001$).

The deinstitutionalization movement displaced high-risk behavioral health patients out of long-term state-owned behavioral health hospitals into outpatient community-based programs and facilities without a comprehensive discharge planning procedure and process in rural areas, causing a 'revolving door' effect of readmissions within the local ED, resulting in ultra-short inpatient stays (Fulone et al., 2021; Sergeren et al., 2022). The deinstitutionalization law is responsible for the closure of thousands of large government behavioral health institutions around the world, resulting in recidivism, homelessness, death, and overcrowding of EDs with individuals suffering from mental illness and substance abuse disorders, leading to readmissions (Morris et al., 2018).

Readmission Rates

A binary logistic regression analysis was conducted to investigate to what extent, if any, is there a correlation between discharge disposition, rural access (patient location), and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. The outcome of interest was readmission rates. The possible predictor variables were discharge disposition, rural access (patient location), hospital control, LOS, and diagnosis. The Hosmer-Lemeshow goodness-of fit

was significant ($p < .001$), indicating the model is not correctly specified. Additionally, the *-2* log Likelihood = 226893.051 and the Nagelkerke R squared = .002. The model resulted the IV rural access (patient location) not significant ($p > .05$); however, the IV discharge disposition, hospital control, LOS, and diagnosis were found to be significant ($p < .001$). Therefore, influencing hospital administrators to establish preventative measures such as pre/post-discharge interventions, bridging interventions, and quality improvement initiatives to reduce readmissions among high-risk behavioral health patients in rural areas. Controlling for discharge disposition, rural access (patient location), hospital control, LOS, and diagnosis, the predictor variable, discharge disposition: home or self-care, in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [.157], *SE* = [.034], *WALD* = [21.473], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [117%] increase [*Exp (B)* = [1.171], 95% CI (1.095, 1.251) for every one unit increase of readmission rates. The predictor variable, discharge disposition: transfer short-term hospital, in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [.398], *SE* = [.057], *WALD* = [48.842], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [150%] increase [*Exp (B)* = [1.498], 95% CI (1.332, 1.665) for every one unit increase of readmission rates. The predictor variable, discharge disposition: other type of facility, in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [.107], *SE* = [.037], *WALD* = [8.546], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [111.3%] increase [*Exp (B)* = [1.113], 95% CI (1.036, 1.196) for every one unit increase of

readmission rates. The predictor variable, hospital control: government, non-federal (public), in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [-.064], *SE* = [.018], *WALD* = [12.721], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [94%] increase [*Exp (B)* = [.938], 95% CI (.906, .972) for every one unit increase of readmission rates. The predictor variable, hospital control: private, not-for-profit (voluntary), in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [-.100], *SE* = [.013], *WALD* = [56.420], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [91%] increase [*Exp (B)* = [.905], 95% CI (.881, .929) for every one unit increase of readmission rates. The predictor variable, LOS, in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [.005], *SE* = [.000], *WALD* = [126.095], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [101%] increase [*Exp (B)* = [1.005], 95% CI (1.004, 1.006) for every one unit increase of readmission rates. The predictor variable, high-risk behavioral health diagnosis, in the logistic regression analysis was found to contribute to the model. The unstandardized *B* = [1.33], *SE* = [.026], *WALD* = [26.400], $p < .001$. The estimated odds ratio favored a positive relationship of nearly [114.2%] increase [*Exp (B)* = [1.142], 95% CI (1.085, 1.201) for every one unit increase of readmission rates.

According to the binary logistic regression analysis, the null hypothesis, that there is not a significant relationship between discharge disposition, rural access (patient location), and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis, can be rejected.

Analyzing and Interpreting the Findings in Theory Context

The study's outcome supported the theory in the context that Donabedian's (1966, 1988) structure, process, and outcome model, on total quality management within the healthcare industry, regard readmissions as part of the outcome of inadequacies in hospital care. Readmissions occurred most often during the first 30- or 90-days post-discharge, the period during which the readmission is related to the index admission (Donabedian, 1988). Utilization of Donabedian's theory provided support for the application of structure, process, and outcome in behavioral health hospitals to improve the organization and environment in which the HSO operates (Donabedian, 2005). Structure embodies the administrative authority and control that facilitates the behavioral health hospital's financial management, human capital, and the equipment and supplies needed to provide care (Donabedian, 1988, 2005; Kunkel et al., 2007). Process falls under the instructions of the behavioral health hospital administrator, practitioner, and patient to solidify the delivery of adequate care, i.e., services, mechanisms, and interventions (Donabedian, 2005). Outcome signifies the application, utilization, improvement, or scarcity of services involving a patient's health status upon successful or failed treatment (Donabedian, 1988, 2005; Kunkel et al., 2007). The outcome of readmission represents failed treatment or continuum of care services, denoting a patient's quality of care and quality of life. The variables that the analyses have tested to be statistically significant coordinate precisely with the constructs.

The logistic regression analysis performed on the variables produced statistically significant findings involving the relationship between discharge disposition, and

readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. The results identified the structure as the government, state-owned behavioral health hospital, implementing a standard process of discharging high-risk behavioral health patients into community-based programs or facilities, resulting in the outcome of ultra-short hospital readmissions. Rural access (patient location) showed no correlation with the dependent variable readmission rates. The deinstitutionalization law prevents long-term hospitalization, limiting access for high-risk behavioral health patients, and inadvertently, forcing patients into local EDs for mental illness and substance abuse disorders. The deinstitutionalization law has caused barriers to behavioral health care for high-risk patients due to the elimination of the structure required to support such patients, which is a modernized institution for those without the capacity and family to care for themselves as wards of the state. The comprehensive processes such as a strategic discharge plan needed to sustain high-risk behavioral health patients pre/post discharge must be updated or established. Assessing events after discharge from the hospital is only a small attempt to capture the delayed effects of poor quality in hospital care (Donabedian, 1969). Interventions that ensure a recovery outcome, as opposed to repeated hospital readmission, must be supported by hospital administrators, politicians, physicians, nursing staff, insurance companies, and family members. Barriers within the three approaches to assessing quality identified by Donabedian may disrupt the patient's recovery, resulting in relapse, recidivism, homelessness, and death. The outcome of hospital readmissions and ED overcrowding amongst high-risk behavioral health patients involving the structure, process, and

outcome quality model presented by Donabedian have not been heavily researched (Spitzer, et al., 2023).

Limitations of the Study

Secondary data sets were purchased from the HCUP. The process of obtaining the data was not straightforward; it came with a lot of limitations. Accessibility of the data sets was only obtainable due to the completion of a 10–15-minute interactive training video, the signing of a Nationwide User Agreement, student verification, and the same process for anyone that you may need to assist with the data (e.g., methodologists). The data sets come with a password as expected; however, the purchaser has only three attempts or 7 days to download the data sets, which was a major challenge. Computer storage space was an issue due to the multitude of several large data sets; therefore, this required an additional 3 terabytes of external space. These problems forced me to request an extension from HCUP for the data sets that had already been purchased because the attempts exceeded three tries. HCUP had no problem meeting the request, stating they anticipate such problems. Finally, once the data sets were downloaded with additional software (i.e., WinZip), which required the manipulation of storage space by pushing more documents and applications off the computer onto the external drive. WinZip defaulted to excel, and the data sets were too large for excel, the required software must be an ASCII software application—SAS, SPSS, or STAT. Therefore, the typical computer, whether Windows or Macintosh, is set up to use Excel when it comes to numbers; this creates an error that prompts the user to fix the problem by changing the default from excel to an ASCII software application. Upon taking hours to download

such large data sets, once all the kinks have been ironed out, there was a final step in starting the process of cleaning the data for preparation analysis. The syntax from the ASCII software application must be manipulated, and the researcher much copy and paste the path to where the data is located on the computer directory to run the syntax to show the entire data and variable view; if this part has not been completed, identifying the variable names will not be possible.

In compliance with the HIPAA guidelines, to safeguard patient confidentiality, no date information is released on the NRD revisit variables. Therefore, while this study examines 30-day readmissions for behavioral health high-risk patients, it cannot identify which readmissions came first if the same gender, age, and visit link ID are utilized as the qualifying verified elements that determine readmissions, without a date, due to a limited data set (Agency for Healthcare Research and Quality, 2022).

Recommendations

This study analyzed the relationship between discharge disposition, rural access (patient location), and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis. The objective was to examine readmissions within government behavioral health facilities in rural areas, to bring awareness to behavioral health hospital administrators to establish preventive measures such as pre-discharge interventions, post-discharge interventions, bridging interventions, and quality improvement initiatives to reduce readmissions of state-owned inpatient behavioral health high-risk patients in rural areas. Data was accessible via HCUP, by way of AHRQ, providing some of the largest healthcare databases supported by the United

States Department of Health and Human Services (HCUP, 2022). Although data satisfied the sample population of behavioral health patients within government-run entities, further review of the literature would be recommended to narrow the knowledge gap regarding the outcome of hospital readmissions and ED overcrowding amongst high-risk behavioral health patients in private entities; involving the structure, process, and outcome quality model presented by Avedis Donabedian.

The outcome and limitations of this study create the opportunity for future research. Recommendations to replicate this study using a mixed methods approach by adding the coronavirus disease (COVID-19) to the independent variables considering the magnitude of the pandemic as it relates to those individuals with mental illness and the exacerbation of substance abuse. The fear, despair, and loneliness that the pandemic caused created an era that has changed society forever and patients are still peeling back the layers of trauma this virus has caused.

Schieber et al., (2023) conducted a cross-sectional analysis identifying more than 1.2 million emergency department patients with COVID-19 and behavioral health disorders, which had a greater probability of hospitalization as opposed to those with just mental illness. Substance use disorders alone had a higher association with hospitalization. Examining the impact of how a comprehensive discharge plan will benefit a post-discharge high-risk behavioral health patient recovering from COVID-19 and long COVID as it relates to readmissions, may reveal a need to revise existing processes and procedures in behavioral health facilities.

The final recommendation pertains to the AHRQ, HCUP, SAMSHA, and the HHS to forge a collaborative effort in conducting extensive research on manufactured marijuana as a gateway drug and how it sets the stage for drug addiction, which acts as a driving force for psychoses and other forms of mental illness (Berenson, 2020). Government agencies have the resources to save so many lives and building data specifically for this type of research may create a blueprint to combat drug addiction while simultaneously, preventing mental illness and reducing repeated readmissions. Improving the limitations of this study would start with the retrieval, downloads, and interpretation of the HCUP data sets. The secondary data used to conduct this study is overwhelming for a novice to decipher. Therefore, a recommendation for HCUP and constituents is to streamline the data in a way that is comprehensible to the layperson and to change the way it is retrieved from future researchers.

Implications for Professional Practice and Positive Social Change

The results of this study may have implications on professional practice, methodological, theoretical, empirical, and positive social change across behavioral healthcare platforms amongst hospital administrators, practitioners, nurses, politicians, and insurance companies.

Discovering measures and effective practices to decrease behavioral health readmissions among high-risk behavioral health patients presents implications for professional practice. Hospital administrators hold the power to develop, revise, or eradicate practices, processes, and procedures within behavioral health hospitals. Hospital administrators must establish preventative measures such as pre/post-discharge

interventions, bridging interventions, and quality improvement initiatives to reduce readmissions among high-risk behavioral health patients. The findings from this study inform hospital administrators how important preventative measures are to the continuity of care, healing, recovery, and sustainability of the patient's quality of life as they move on from institutionalization into the real world. Avedis Donabedian's (1988) structure, process, and outcome model highlight three facets of quality health care, providing the hospital administrator with the blueprint required to set the patient up for success. Donabedian builds the theoretical foundation on which to establish any methodological procedures for the design and analysis of quality improvement and outcomes research (Donabedian, 2003). Donabedian's ideology provided the lens through which the theoretical foundation of quality improvement practice was viewed. Structure creates a healing environment in which healthcare services are provided, consisting of tangible and human resources, as well as administrative characteristics. To articulate the restrictions and benefits within the system that forms a person's behavior and the system's ability to deliver the highest quality of care, defining and analyzing a process's structure is paramount. Oftentimes, structure can be the leading barrier to the quality of care provided by a system. Specific changes in various system idiosyncrasies can have an ineffective connection to the corresponding quality. However, as a benefit, a few features of structure are instantly noticeable and well-reported, which is constant (Donabedian, 2003). Process dictates the steps required in the provision of adequate services. Behavioral healthcare processes consolidate different duties and functions, which make up healthcare, such as diagnosis, medical care, recovery, prevention, and literacy (Nelson

et al., 2007. Practitioners normally, perform these responsibilities; however, the patient and their families may help as well. Specific attributes can offer critical knowledge that justifies the quality of care, but the quality is not entirely implicit of process. Quality is a precursor to evidence-based care practices that have already been proven to produce positive outcomes. Processes have more of an association with outcomes as opposed to structure. Processes exhibit fewer differences in quality and occur at the present, showing an instant likelihood of quality (Donabedian, 2003). Outcomes are measured guidelines of the processes inside the structure, established upon a specified criterion. Outcomes are considered as the successes and failures of an individual's health care results. Outcomes involve multiple aspects of variations in an individual's health condition, such as the patient's level of improvement, education regarding their disease pathology, morbidities, behavior changes, family support requirements, and overall patient satisfaction (Donabedian, 2003). Quantified patient outcomes offer valuable reinforcement for the development of practice in patient care. The association between processes and patient outcomes has been thoroughly debated. Attributing outcome to process and the possibility that a specified process or series of processes influence outcome(s), poses a challenge. Utilizing outcome as a measure of quality is advantageous because it acts as a compass for the performance and level of care. Nonetheless, the probability of the patient outcome is centered on both the therapeutic adequacy of the medical care regimen and the adequacy of the distribution of that care regimen (Donabedian, 2003; Langley et al., 2009). Structure, process, and outcome are integrally relevant and connected, coexisting interdependently. These three aspects must be analyzed as a total concept, providing an

all-inclusive articulation of the benefit that each part plays as a contributing factor to the quality of care being explored (Donabedian, 2003). Before the expansion of improvement processes to the larger system called the macrosystem, quality improvement originally focused on the microsystem, leaving a gap, so to speak within the framework of quality (Nelson et al. 2007).

Practitioners and nurses must acquire the proper credentials, skills, education, and training needed to implement adequate processes, procedures, and outcomes that are set forth by the hospital administrator on a macrosystem scale to foster a continuum of quality care and bring awareness and literacy to patients upon admission and discharge from the hospital or healthcare facilities.

Politicians have the authority to push for policy change from the bottom up, advocating on a global level. For example, a political movement imbued with almost a cult-like fervor during the passing of the deinstitutionalization law, was well intended, but poorly executed. The deinstitutionalization law did not fulfill the original expectations prescribed by Congress. The deinstitutionalization movement displaced hundreds of thousands of patients from state institutions, implementing mass closures of large psychiatric hospitals to save money. The decision was made without exploring the possibility of an adverse influx of patients creating a 'revolving door' effect into other forms of institutionalization such as jails and correctional facilities, utilizing even more capital than originally intended. The population of high-risk behavioral health patients that did not experience recidivism, were left with high doses of medication to manage their disorder. Psychotropic medications were seriously considered during the passing of

the deinstitutionalization law as the miracle medication needed to stabilize high-risk behavioral health patients. Psychotropic medication like any other medication has side effects, flaws, and adverse effects that can cause permanent biological changes, rendering it ineffective in a way that chronify behavioral health disorders, whereas a high-risk patient's health could have improved without it, and their health declined. The urgency of the deinstitutionalization mandate was so attractive, other provisions of mental health services were overlooked, bringing policymakers full circle back to the drawing board. The need for a more modernized behavioral health institutionalization approach is warranted now that the deinstitutionalization law has proven to be deficient. Policy reform will provide institutionalization for high-risk behavioral health patients that have no other recourse but to be a ward of the state, there must be a place for humankind that cannot care for themselves when they have become disabled with mental illness. The outcome of high readmission rates has shown this theory to be true, therefore, revising the deinstitutionalization law will combat homelessness, prevent overcrowding of the local EDs, jails, and correctional institutions, deaths, and relapse among high-risk behavioral health patients, providing them with hope, a stable recovery model and quality of care platform, provoking a positive social change epidemic.

The Mental Health Parity and Addiction Equity Act and similar laws require health insurers to provide behavioral health coverage equal to the standard conventional health insurance, yet behavioral health coverage remains to be inadequate. Hospital readmissions are prevalent amongst high-risk behavioral health patients with inadequate provider networks, uninsured, and underinsured. A shortage of behavioral health

professionals exists and those that do exist do not accept behavioral health insurance, creating a gap in coverage that is crucial to the recovery of high-risk patients. The government must establish an incentive program for behavioral health professionals to contract with state behavioral healthcare organizations that will meet the provider-patient ratio and close the network adequacy gap, impacting professional practices and creating a positive social change.

Conclusion

This section concludes the study by summarizing the key research findings concerning the research aims and research question, as well as the value and contribution thereof. It will also propose opportunities for future research.

This study aims to investigate readmissions within government behavioral health facilities in rural areas, to bring awareness to behavioral health hospital administrators to establish preventive measures such as pre-discharge interventions, post-discharge interventions, bridging interventions, and quality improvement initiatives to reduce readmissions of state-owned inpatient behavioral health high-risk patients in rural areas. The research question examines whether there is a relationship between discharge disposition, rural access (patient location), and readmission rates among state-owned inpatient behavioral health high-risk patients after controlling for LOS and diagnosis.

The results indicate that there is a statistically significant relationship between discharge disposition, LOS, diagnosis, and readmission rates, rejecting the null hypothesis. However, there is no statistically significant relationship between rural access (patient location) and readmission rates, accepting the null hypothesis. A power analysis

determined that the population sample size to be examined was adequate to conduct a binary logistic regression analysis.

The outcome of this study confirms and extends knowledge within the discipline of behavioral healthcare administration relative to hospital readmissions for high-risk behavioral health patients in rural areas. The results of the statistical analysis align the research study with Avedis Donabedian's theoretical framework presented in the study and readmissions amongst high-risk behavioral health patients in rural areas.

This study's results may help address the recovery needs of high-risk behavioral health patients and bring awareness to those contributing factors related to the determinants of the appropriate discharge site and next level of care in rural areas. The findings of this study could also assist hospital administrators to construct quality improvement methods, practices, procedures, processes, and policies to ensure that SMI patients acquire adequate treatment and medical care, alternative interventions, support, and create professional practice. The outcomes of this research study may influence policymakers to revise the deinstitutionalization law to combat hospital readmissions, overcrowding EDs, recidivism, relapse, deaths, and homelessness, creating a positive social change epidemic among high-risk behavioral health patients in rural areas. Further advancement in knowledge can impact government officials and healthcare providers on patient health readmission outcomes, provoking healthcare policies on a global level to understand the impact of readmissions among high-risk behavioral health patients in rural areas and the impact on patient health outcomes. Effective policy change may improve the delivery of

behavioral healthcare services, promoting next-level access to care for the patient populous.

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