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Mental Health Outpatient Services and Hospital Readmissions Among Adolescent Patients in Louisiana

Whitney Walker
Walden University

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Walden University

College of Management and Human Potential

This is to certify that the doctoral study by

Whitney Walker

has been found to be complete and satisfactory in all respects,
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Review Committee

Dr. Cheryl Cullen, Committee Chairperson, Health Sciences Faculty

Dr. Eboni Green, Committee Member, Health Sciences Faculty

Dr. Suzanne Richins, University Reviewer, Health Sciences Faculty

Chief Academic Officer and Provost

Sue Subocz, Ph.D.

Walden University

2023

Abstract

Mental Health Outpatient Services and Hospital Readmissions Among Adolescent
Patients in Louisiana

by

Whitney J. Walker

MHA, Walden University, 2014

BS, Grambling State University 2010

Doctoral Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Healthcare Administration

Walden University

August 2023

Abstract

Hospital admissions and readmissions among Medicaid patients significantly impact increased healthcare costs for the state of Louisiana and are associated with poor quality of care. The specific research problem under study was the relationships, if any, between mental health outpatient services in Louisiana, either individual therapy or home and community-based services post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. Secondary quantitative data analysis was performed using the Island Peer Review Organization Annual External Quality Review Technical Report and data from the managed care organization in Louisiana. No significant relationship was found between mental health outpatient services post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. A multiple regression model was used (age, gender, and service) and the findings were not statistically significant ($F [3, 265] = 0.34, p = .80, R^2 = .004$). A logistic regression model (age, gender, and type of care) was conducted and, again, the findings were not statistically significant ($\chi^2 [3, N = 269] = 1.04, p = .79$). Further study is needed to help identify potential social factors contributing to hospital readmissions among adolescent patients receiving mental health outpatient services post-hospital discharge. The findings of this study have potential implications for positive social change because they provide additional information regarding hospital readmissions and mental health services among an infrequently studied population, adolescent Medicaid patients with the goal of reducing costs for the state and delivering positive outcomes for patients.

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Dedication

I dedicate this doctoral study to my mom and my great grandmother for keeping their promise and the support of my goals. My great grandmother was a strong beautiful woman who carried the world on her back by carrying the family and herself. My great grandmother passed October 30, 2008 at the age of 94, at the time I was in college and struggled with the fact of losing a part of my heart and keeping up with my academics. At the time she made me promise her that I will finish school and continue with my goals. I know she would be proud of me that I have accomplished my goal of receiving my doctorate. To my mom, my heart! You were there when I needed a push and continued to be my biggest supporter during this journey. My mom has sacrificed a lot for me, and I will do the same for her, my love. To my dad, thank you for showing me your strength through complex challenges and never giving up on your dreams. Thank you!

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I thank God and my Ancestors for this journey, I am forever thankful for the spiritual insight, guidance, and calling to complete this amazing process. I want to thank my supportive friends that checked in on me to make sure I was staying on the path of completion of my goal. I would especially like to thank Dr. Cheryl Cullen for her supportive guidance, patience and understanding. It's amazing to have a Chair who shows compassion and helps keep you keep focused on the research and your purpose. I would also like to thank my committee member Dr. Edessa Jobli and URR member as well.

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Section 1: Foundation of the Study and Literature Review

Introduction

Rates of hospital admissions and readmissions continue to impact the future of adolescent quality of psychiatric care. Due to increased hospital readmissions, outpatient mental health services are implemented to decrease the readmission of adolescents receiving behavioral health services based on the level of care/diagnoses and Louisiana Medicaid funds. According to Feng et.al. (2017), the decrease of hospital readmissions is a health care system goal. Understanding the gap in readmission patterns among adolescents and after care of discharge planning may help identify readmissions factors and increase quality and delivery of mental health services. Clinical factors are the strongest predictors of recurrent hospital admissions, (Bryson & Akin, 2015). Adolescents diagnosed with mood disorders and behavioral health and psychotic diagnoses have a higher chance of experiencing multiple acute inpatient admissions than other mental health beneficiaries; the rate of readmissions of adolescents may identify that community-based mental health services are less successful, especially in rural areas (Bryson & Akin, 2015). In this section, I discuss the study of hospital readmissions among the adolescent population including the background, problem, and research questions including community-based mental health services. In this study, I examined mental health services post discharge of recurrent hospitalizations, and the study findings may inform Louisiana Medicaid administration of the relationship, if any, between readmissions and level of care adolescents are receiving in the community.

Problem Statement

The state of Louisiana has a contract with a managed care organization (MCO) to monitor and assure quality mental health services for adolescent patients and to monitor compliance and delivery of behavioral health services to decrease hospital admissions and readmissions (Louisiana Department of Public Health, 2022). The MCO manages a contract with the state of Louisiana to assist youth who are at risk of out-of-home placement, such as juvenile detention centers and recurrent hospitalizations. The problem is that hospital admissions and readmissions have a significant impact on increased healthcare costs for Louisiana Medicaid and are associated with poor quality of care (Askren-Gonzalez, 2012). Mental health conditions are one of the common reasons for hospitalizations for adolescents, but there is a lack in understanding regarding readmission patterns after admissions (Feng et al., 2017). Contrary to a collaborative, multidisciplinary approach to discharge planning, the failure of quality follow-up care has resulted in patient 30-day readmissions rates up to 50% (Askren-Gonzalez, 2012). Feng et.al. (2017) found that mental health admissions account for one fifth of pediatric hospitalizations, followed by a higher rate of unplanned readmission than other hospitalizations.

Kudyba and Perry (2015) proposed that more research is needed to identify any relationships between recurring readmission patterns of mental health patients and the level of care and patient utilization of outpatient services to ensure quality mental health services are adequate in the future. The relationship of readmission risk and the influence of the need and support services post discharge has not been identified as an influence of

recurrent hospitalizations (Guzman-Parra et al., 2018). This research study may fill the gap in the literature identified by Kudyba and Perry (2015) and Guzman-Parra et al. (2018) to inform Louisiana Medicaid administrators and mental health professionals of the relationship of post discharge services, including mental health outpatient services, gender and age of the patient with readmissions among adolescent patients.

The Purpose of the Study

The purpose of this quantitative study was to determine the relationship between the independent variables, mental health outpatient services either individual therapy, a form of therapy in which the patient is treated on a one-on-one with a therapist and can consist of emotional or mental health needs (Louisiana Department of Health, 2022) or home and community-based services (HCBS) post-hospital discharge, which are Medicaid paid services rendered within the home or a community-based setting. HCBS consist of family support, respite care, and individual living skills building (ILSB; Louisiana Department of Health, 2022). The independent variables include the gender of the patient and the age of the adolescent patient. The dependent variable, hospital readmission post-hospital discharge, is defined as a patient admission to hospital within 30 days after being discharged from a previous hospital stay (Centers for Medicare and Medicaid Services [CMS], 2022). The findings may inform the Louisiana Medicaid administrators and MCO leaders of the relationships between mental health services, either individual therapy or HCBS, gender of the patient, and age of the adolescent patient that contribute to the hospital readmissions and spark the development of quality measures (Feng et al., 2017).

Research Question(s) and Hypotheses

The independent variables are the type of mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient. The dependent variable is the number of hospital readmissions over 1 year. The following research question and hypothesis guided this study:

RQ- What is the relationship, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year?

H_0 - There is no significant relationship between mental health outpatient services in Louisiana post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

H_A - There is a significant between mental health outpatient services in Louisiana post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

Theoretical Framework of the Study

The transitional care model (TCM) focuses on the improvement of quality and the factors of patient transition from hospital to home (Rezapour-Nasrabad, 2018). The model is for the prevention of hospital readmissions and cost by providing patients with comprehensive discharge planning and enhances the overall physical quality of life (Rezapour-Nasrabad, 2018). Many hospitals have implemented TCM with preventive care pre-discharge and post discharge of the inpatient stay with the aim to improve patient outcomes and decrease hospital readmissions and state costs. If implemented, TCM

focuses on hospital-based discharge and treatment post discharge from hospital to home (Rennke & Ranji, 2015). The theory bridges the gaps between different healthcare settings such as hospitalizations and outpatient services.

The findings of this study may inform the Louisiana Medicaid administrator and MCO leaders of any relationship between the independent variables mental health outpatient services either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient and the dependent variable, is the number of hospital readmissions over 1 year. TCM was appropriate to apply to the study as the goal is to decrease the number of hospital readmissions and ultimately reduce costs. An essential part of the model is the involvement of mental health professionals and outpatient services that identify the patient's behavioral changes and responsibility of aftercare post discharge (Rezapour-Nasrabad, 2018).

Nature of the Study

The nature of the study is quantitative, using secondary data not previously collected for research. Mental health outpatient services and gender are nominal data and age, and number of readmissions are ratio data. The mental health outpatient services are nominal data due to no quantitative value and the variables are named such as individual therapy, HCBS, and gender male/female. Age and readmissions are ratio data because variables are a true zero value, meaning there is no difference in the 0 years to 10 years of age or from the ages 10 years to 20 years.

The 2020 Island Peer Review Organization (IPRO) annual external quality review technical report and MCO data were used as secondary data. The data were extracted from hospital readmissions and quarterly quality reports obtained by the MCO for me and included the outpatient services post-hospital discharge, gender of the patient, and age of the adolescent patient and the number of hospital readmissions over 1 year. A relationship comparison of the data has not previously been made by MCO leadership and has not been collected for a previous research study, which makes this study unique use of the nominal and ratio data. The information is based on monitoring results conducted by the MCO over 1 year and authorizations of mental health outpatient services. The study may provide information regarding any relationships between the independent variables, mental health outpatient services, post-hospital discharge, gender of the patient, and age of the adolescent patient and the dependent variable the number of hospital readmissions. Analysis of the correlational relationship of the independent variables and the dependent variable is discussed in Section 2 (see Rumsey, 2011).

Literature Search Strategy

In this research study, I sought to examine the relationships, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. In my review of the literature, I sought to contextualize the study within the existing research related to the phenomenon. The initial step in my literature review was to search for sources using Google, Google Scholar, and Walden University library. Related peer-review articles were found on EBSCOhost and Medline,

and additional information was found from the CMS and the National Institutes of Health. Terms related to the research question were searched, including *individual therapy, home and community-based services, hospital readmissions, and post-hospital discharge*. I searched for articles published within 5 years, but I had to expand my searches to older research to be more extensive concerning post-hospital discharge for the targeted population. I reviewed the latest research from 2010–2021, the years of the Medicaid expansion, and updated information from the websites CMS websites and from the Louisiana Department of Health.

Literature Review

The goal of the state of Louisiana related to the phenomenon under study is to encourage hospitals and professionals to develop programs or services improve the coordination of patient care and reduce hospital readmissions. Many researchers have focused on patient populations and medical hospitalizations due to heart failure or diabetes. There has been limited research related to mental health outpatient services and hospital readmissions. This section includes a review of the existing research on mental health outpatient services, the age of adolescent patients, and hospital readmissions. Topics include the level of care including outpatient services, and readmissions among Louisiana Medicaid adolescent patients. The types of outpatient services consist of the Medicaid services such as individual therapy and HCBS. Peer-reviewed articles were used to determine the relationship between independent variables: type of mental health outpatient services, either individual therapy or HCBS post-hospital discharge and age of the adolescent patient, and the dependent variable, the number of hospital readmissions.

Evolution of Medicaid at a national level and within the state of Louisiana

The Affordable Care Act (ACA) in 2010 helped millions of low-income Americans gain health insurance through state Medicaid expansion (Golberstein & Gonzales, 2015). ACA allowed states to expand Medicaid eligibility to families with income at or below the 138% of the federal poverty level. The ACA was designed to increase access to healthcare, reduce insurance-related disparities, and increase health outcomes. Under Medicaid expansion, the federal government would cover the full cost of patients in each state reducing the out-of-pocket healthcare expenses of qualified individuals. Across the United States, 35 states accepted ACA's Medicaid expansion. In Louisiana, the expansion took effect June 1, 2016, and continues to increase the number of individuals receiving preventive care or new patient services (CMS, 2022).

Hospital Readmissions for Adults and Adolescents

Mental health conditions are a common reason for hospital readmissions, especially for the pediatric population. Mental health admissions accounted for one fifth of the pediatric population by an unplanned readmission (Feng et al., 2017). Hospital readmissions are one of the largest expenses in the United States, due to high healthcare use and recurrent patterns of readmissions. Shafer (2019) provided research data for 491,094 hospital discharges for 250,091 patients across a statewide public mental health hospital for 30 years (1987- 2016). The data provided predictors of hospital readmissions and high healthcare use. According to Shafer (2019), the major predictors of hospital readmissions were diagnoses of schizophrenia and bipolar disorder. Patients who

received follow-up healthcare services after discharge and frequent emergency room visits within a year are considered individuals with high utilization.

The increase of hospital readmissions within one month signals a gap in quality of care, according to Gao (2021). Of the millions of Medicare patients' hospitalizations per year, 1 in 5 are readmitted within a month of discharge and return to the emergency department due to inadequate discharging and poor coordination of care between the hospital and community-based coordination of the MCO. Few analyses have been conducted on the readmissions among the Medicaid managed care population, among adults age 45–64 who are Medicaid patients, 22% have chronic health diagnoses. Hospital readmissions represent 12% of Medicaid payments for all hospitalizations averaging 77 million per U.S state annually. Most of the United States' attention has been on the increase of incentives, financing, and technical assistance to resolving the challenges of readmissions, but only focused on patients who are insured with Medicare and not Medicaid patients (Gao,2021).

The focus of Medicaid hospital readmissions begins with ACA, which was designed to effectively minimize readmissions, especially in the pediatric population. Many states have implemented different programs for the expansion of the ACA. These programs were developed to have more engagement post hospitalization discharge. Post discharge engagement for members who are at high risk of readmissions is essential. According to Gao (2021), post-discharge implemented by the MCO interventions decreased the likelihood of readmissions through frequent patient, provider, and hospital

coordination. Post-discharge planning includes scheduling outpatient mental health appointments in the community.

A study was conducted concerning inpatient psychiatric discharges to determine the outcomes of patients receiving outpatient care following hospital admissions (Smith et al., 2020). Patients under age 65 admitted to an inpatient psychiatric unit were examined post discharge and received outpatient mental health services within 7 to 30 days following discharge (Smith et al., 2020). Smith et al.'s results were based on 15,520 discharge patients: 11,945 (77%) had an appointment scheduled with a mental health provider as part of their discharge planning. The scheduling of an outpatient mental health appointment is an effective and low discharge planning practice that may decrease hospital readmissions for adults and adolescents (Smith et al., 2020).

Social Stigma of Mental Health and Adolescents

Social stigma is a key factor in mental health. The perceptions and experiences of mental health strain adults and adolescents receiving proper healthcare. The stigma of mental illness for adolescents can stem from perceptions of members of their family and communities. Adolescents' environments have a substantial impact on their behavioral and emotional health and risk of out-of-home placement. Moses (2010) identified connections between perceptions of mental illness from adolescents and parents and experiences related to self-stagnation. Negative stereotypes are often placed on mental health diagnoses.

According to Bradbury (2020), a common theme in research is that individuals with mental illness, particularly diagnoses of schizophrenia, are dangerous and many

people avoid those individuals due to the social stigma and fear of their behaviors. Mental health diagnoses on a spectrum are viewed negatively despite numerous education and research on mental health illnesses. Bradbury 2020, In a cross-section survey design study, Bradbury (2020) the attitudes of young people ages 16–18 and adults ages 40 years and over to explore responses to questions related to generalized anxiety disorder and schizophrenia. The purpose of the study was to examine influence based on age and gender of participants attitudes towards mental health (Bradbury, 2020). Bradbury hypothesized that the younger generation would be less opinionated on mental health than the older participants. However, results indicated that participants 40 years and over reported lower levels of stigmatized views toward anxiety disorder and schizophrenia compared to participants ages 16-18. This finding suggests that, as individuals age, they become more informed and accepting of people who are different and more resistant to the stigma of a mental health diagnoses (Bradbury 2020).

Mental Health Services for Adolescents

According to Malla et al. (2020), the highest population of mental health disorders and addictions that cause by increased morbidity and mortality are among adolescents and youth adults. Children and adolescents do not seek and access professional help for mental health services due to many factors (Radez et al., 2021). Radez et al. identified themes/barriers in their study that included social factors, factors related to building a relationship with a mental health professional, personal individual factors, and systemic and structural factors. An adolescent's choice to receive mental health services can be

based on being informed on the process of receiving outpatient services and the ability to verbalize their decision to access particular services for treatment (Radez et al., 2021).

The increase of mental health disorders and addictions within the adolescent population requires services from the integrated health system for early intervention of mental health diagnoses and hospitalizations. Needs of the adolescent population are within the areas of education, housing, employment, and physical and sexual health (Malla et al., 2020). Those needs require additional services for adolescents with mental health disorders; therefore, more evidence-based treatment (EBT) services have been developed. Some EBT services were developed in many states but were not available in public mental health settings; this caused barriers for treatment and resulted in multiple hospitalization readmissions (Dorsey et al., 2014). The expansion of Louisiana Medicaid provided more access to care and decreased the unmet need of mental health services for not only adults but also for children and adolescents. The expansion allowed integrated healthcare to address follow ups after hospitalizations, clinically addressing mental health disorders by providing outpatient services within the community.

Louisiana History of Medicaid Services

Medicaid is tailored to the state plan that best serve the needs, so there are different services that are offered (CMS, 2022). In the past Medicaid only offered to those getting cash assistance but now Medicaid covers a larger population such as low-income families, long term-care, and those with disabilities. Within the country each state develops a plan to submit to the

federal government for approval, the state plan approves the plan based on Medicaid guidelines to provide healthcare services for the select population and member eligibility (Louisiana Department of Health, 2022). The state plan establishes criteria for eligibility and payment and as well the monitoring of managed care services, this is where managed care organizations monitor the Medicaid program and the delivery of services that are following the federal rules and regulations and laws.

Louisiana Medicaid program began in 1966 and continue to grow with new state plans up to the year 2020, the growth included the cost of medical services and the eligibility of services (Louisiana Department of Health, 2022). Federal government approved the following medical services inpatient and outpatient hospital services, physician services, screenings, and long-term care services. In 2016 Medicaid Expansion/Health Louisiana state plan provided more patients statewide better access to care and saving cost to the state of Louisiana. In 2017 more than 433,000 Louisiana residents who lacked covered were eligible for the Medicaid Expansion state plan. The expansion included not only increase inpatient and outpatient services but wellness screens and access to primary care to residents that were uninsured (Louisiana Department of Health, 2022).

Definitions

The following are key terms that will be used throughout this study:

1915(b) Waiver: Medicaid wavier allows states certain provisions such as freedom of choice of providers, service comparability, and state wideness of program (Louisiana Department of Health, 2022).

1915(c) Waiver: Medicaid waiver authorized by section 1915 of the Social Security Act that allow states to provide certain services to specific populations known as home and community-based waiver (Louisiana Department of Health, 2022).

Adolescents: the period transition from childhood to adulthood, between the ages of 10 to 19 years of age (World Health Organization, 2022).

Affordable Care Act (ACA): The act was extended to millions of low-income Americans to gain health insurance through state Medicaid Expansion (Golberstein &Gonzales, 2015).

Eligible: A person who qualifies to receive Medicaid services (Louisiana Department of Health, 2022).

Home and Community Based Services (HCBS): Medicaid paid services rendered within the home or in a community-based setting. HCBS services consist of family support, respite care, and ILSB (Louisiana Department of Health, 2022).

Hospital Readmissions: An admission to a hospital within 30 days of discharge (CMS, 2022).

Individual Therapy: A form of therapy in which the patient is treated on a one-on-one basis with a therapist ((Louisiana Department of Health, 2022).

Managed care organization: Integrated entities within the healthcare system that has contracts with health care providers and medical facilities to provide care for members at reduced cost (MedlinePlus, 2019).

Medicaid: Health coverage for eligible members including low-income adults, children, pregnant women, elderly adults and people with disabilities. Medicaid is administered by states according to federal requirements (Louisiana Department of Health, 2022).

Outpatient services: Medical procedure, services, or test that can be provided to the patient that does not require overnight stay (Louisiana Department of Health, 2022).

Post- hospital discharge: Discharge from hospital after treatment (Louisiana Department of Health, 2022).

Provider: A person or agency who provides a covered Medicaid service to eligible members (Louisiana Department of Health, 2022).

Assumptions

This study assumed a relationship, if any, between mental health outpatient services, either individual therapy or HCBS post hospital discharge, the gender of the patient, and the age of the adolescent with the number of hospital readmissions over one year. A second assumption was that the nominal and ratio data from the 2020 IPRO annual external quality review technical report and MCO data set were accurate. It reflected the mental health outpatient services, either individual therapy or HCBS post hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over one year. The relationship of the independent variable of the mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient could impact the reoccurrence of the patient's hospital readmissions. A third assumption was that the

post-discharge update of the treatment plan and the patient's follow-up care was updated, possibly including correct diagnoses and appropriate assigning of outpatient services.

Scope of Delimitations

Possible barriers to data access include the MCO agreement to monitor data. The employee needs to complete documentation for electronic health records and surveys. Incomplete authorization data of mental health outpatient services and contact health professional's records—barriers to data access for patients enrolled and documented for over one year. Provider lack of participation is a possible delimitation due to poor tracking from MCO on patient improvement per discharge—also, provider lack of qualifications to provide quality services needed to the patient due to incompliance from the agency.

Significance, Summary, and Conclusions

There needs to be more literature regarding knowledge of the readmission patterns of adolescent patients with mental health diagnoses post-hospital discharge (Smith et al., 2020). There was also a gap in the significance of mental health outpatient services post-hospital discharge (Smith et al., 2020). The study may inform the Louisiana Medicaid administrator regarding factors that contribute to readmissions of adolescent mental health patients and the relationship, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient and dependent variable measured by the number of hospital readmissions over 1 year. The study's results may provide a baseline for updating patient programs and collaboration between the Louisiana Medicaid administration and

the MCO to make program changes and reduce readmission rates. The study's results may contribute to positive social change by providing Louisiana Medicaid administrators and MCO leaders knowledge that may reduce the cost for the state and provide positive outcomes for the adolescent population. A review of the literature on a relationship, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, the gender of the patient, and the age of the adolescent patient, and the dependent variable measured by the number of hospital readmissions over 1 year.

The researcher of this study seeks to provide evidence to fill in the gap in the literature regarding the relationship, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. The adolescent's utilization of mental health services, hospital readmissions, and unmet needs of adolescents' mental health is non-compliant. Research has shown evidence that readmissions increase due to failure in discharge planning and follow-up care after discharge (Feng et al., 2017). It is essential to identify the relationship between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, the gender of the patient, and the age of the adolescent patient, with the number of hospital readmissions over 1 year. In Section 1, the researcher presented an introduction to the investigation and an overview of the literature associated with the relationship between independent variables, the type of mental health outpatient services, either Individual Therapy or Home and Community-Based Services (HCBS) post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital

readmissions over one year. The following section presents the methodological details of the study. Section 2 addresses discussions about the study design, population, sample, data analysis, and research question.

Section 2: Research Design and Data Collection

Introduction

The purpose of this study was to determine the relationships, if any, between independent variables the type of mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient and the dependent variable the number of hospital readmissions over 1 year. The findings may inform Louisiana Medicaid administrators and MCO leaders of the relationship between mental health services, that contribute to hospital readmissions over 1 year, which may lead to improved clinical practice and reduced hospital readmissions and spark the development of quality measures (Feng et al., 2017). In Section 2, I discuss the research design and rationale, the methodology presented, and also the target population, sample design, data analysis plan, validity, and ethical procedures.

Research Design and Rationale

A quantitative retrospective research design was conducted secondary data from the 2020 IPRO annual external quality review technical report and the MCO data set. In this analysis, I sought to determine if a relationship exists between the independent and dependent variables. The retrospective research design is used to examine the relationship between two or more variables to determine the existence and strength of a relationship. The research design was used to determine if there was a relationship exists between independent variables, type of mental health outpatient services, either individual therapy HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient, with the number of hospital readmissions over 1 year. This research study may contribute

to the body of knowledge among Louisiana administrators by providing information on the influence of mental health outpatient services, post-hospital discharge, gender of the patient, and age of the adolescent patient. The health discipline may use this information to understand hospital readmissions, post-hospital discharge outcomes, and effects of access to mental health outpatient services for adolescents. The secondary data from the IPRO and MCO of January 01, 2019, to December 31, 2019, of enrollment, a population of 4,358 adolescents. I used Statistical Package for the Social Science (SPSS) Version 27 to analyze the data and identify any correlation between the independent and dependent variables.

Methodology

Population

This research was focused on adolescents clinically diagnosed with mental or behavioral health disorders and their hospital readmissions. The MCO manages a contract with the state of Louisiana to assist youth at risk of out-of-home placement, such as juvenile detentions and recurrent hospitalizations. The contract with the state of Louisiana involves a coordinated system of care (Louisiana Department of Public Health, 2018). The targeted adolescent population receives outpatient mental health services to decrease the risk of out-of-home placement and hospital readmissions. This study included adolescents who received mental health outpatient services and included hospital readmissions, if any, over one year.

Sampling Design and Power Analysis

The IPRO data set and MCO data set were extracted for this study. Secondary data were collected during the review period from January 1, 2019, to December 31, 2019. Permission for using data was granted by MCO and is included in Appendix A. The nominal and ratio data consisted of the monitoring of hospitalization follow-up practices post discharge and the number of patients who received mental health services. CMS requires the state of Louisiana to conduct an annual external quality review of the services provided by the MCO. The data set is a public document that may be accessed without permission from Louisiana Department of Public Health. IPRO is a non-profit organization that works with government agencies and providers on the improving and monitoring of healthcare services (IPRO n.d). IPRO is accredited by the National Committee for Quality Assurance to conducted compliance audits and uses Healthcare Effectiveness Data and Information Set to measure the performance of organizations.

A quantitative retrospective secondary data design was used to determine the relationships, if any, between independent variables type of mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient and dependent variable, the number of hospital readmissions over 1 year. Retrospective design studies are used to determine the possible relationship among selected variables such as the hospital readmissions and outpatient services. Conversano et al. (2020) used a quantitative retrospective design to provide evidence of the relationship between psychological functioning and clinical

characteristics of cancer. Using this research design Conversano et al. (2020) provided evidence determining the relationship among selected variables.

I used G*Power to determine the sample size needed for a three-predictor variable multiple regression model (type of service, gender, and age). For a medium effect size ($f^2 = .15$), an alpha level of .05, and a power level of .80, a sample of 77 respondents was needed according to G*Power. There were 4,358 participants during 2019, which indicates the data met the adequate levels of power for this study.

Figure 1

*Power Analysis Calculation Based on G*Power*

F tests - Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis: A priori: Compute required sample size

Input:	Effect size f^2	= 0.15
	α err prob	= 0.05
	Power (1- β err prob)	= .80
	Number of predictors	= 3
Output:	Noncentrality parameter λ	= 11.5500000
	Critical F	= 2.7300187
	Numerator df	= 3
	Denominator df	= 73
	Total sample size	= 77
	Actual power	= 0.8017655

The independent variables were the type of mental health outpatient services either individual therapy or HCBS post-hospital discharge, gender of the patient and age of the adolescent patient. The dependent variable was the number of hospital readmissions over 1 year. The following research question and hypothesis guided the data analysis.

RQ- What is the relationship, if any, between mental health outpatient services either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year?

H01- There is no significant relationship between mental health outpatient services in Louisiana either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

Ha1- There is a significant between mental health outpatient services in Louisiana either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

Instrumentation and Operationalization of Construct

The state of Louisiana presented the IPRO Annual External Quality Review Technical Report to comply with CMS requirements. No permission is required to access and use the data sets because the data are publicly available. The IPRO report data by year of publication: March 2020, providing a review period of July 1, 2018, to June 30, 2019. IPRO selects measures of data concerning the follow-up care post-hospitalization for mental health illness and the number and percentage of patients who receive services and use of services include reliable information for this study. Data collected in this data set are assumed reliable and valid because the information maintained is federally accessed through the state of Louisiana Office of Behavioral Health is required by CMS state agency contract (Louisiana Department of Health, 2022).

The state of Louisiana's purpose in collecting the data set is to assess and report the impact of the state's program and monitor the accessibility, quality of services, and delivery of care for Medicaid recipients. The performance measures inform Louisiana Medicaid leadership of opportunities for areas of improvement to develop better planning for future activities.

I PRO uses a secure file transfer protocol (FTP) site to collect requested data uploaded by the MCO. I PRO selected performance measures reported by the MCO within a review period from April 1, 2019, through June 30, 2019. For each performance measure, I PRO requested a sample of cases for compliance with the review period. The I PRO collected data set included the number of discharges for adolescents and hospitalizations and scheduled follow-up visits with a mental health practitioner; this included members who received follow-up care within 30 days after discharge and 7 days after discharge. Participants receiving outpatient services by the month reported by the MCO between the requested review period. The interpreted results by the independent variables type of mental health outpatient services, post hospital discharge, the gender of the patient (male or female), the nominal variables, and the age of the adolescent patient with the number of hospital readmissions over 1 year measured on the ratio level.

Data Analysis Plan

SPSS Version 27 software was used to complete data analyses and answer the research question. Many researchers have used SPSS software for statistical data analysis for social sciences research. Secondary data from the MCO, included the calendar year

2019, before the COVID-19 pandemic. The MCO provided a spreadsheet data were screened based on the ages 10-19 and enrollment in the organization during 2019.

A multiple regression model was created using mental health outpatient services, individual therapy and HCBS, patient's gender, and age as predictor variables. The criterion variable was the number of times the patient was readmitted to an inpatient mental health setting. Mental health outpatient services, individual therapy, and HCBS are dichotomous nominal variables, and the number of times admitted is a ratio-level variable. Covariates in the model are gender and age; gender is measured as a dichotomous nominal variable, and age is measured at the ratio level.

The ANOVA F-test's significance was examined for statistical significance in the regression model. Next, the R-square statistic was examined to determine the amount of variance explained by the model. Last, the individual p values for the three predictors were examined for significance. Should the p values be significant, the beta weights would have been interpreted.

Threats to Validity

In this study, the research presents possible external and internal threats to validity. Many threats to validity may raise questions about the ability to conclude that the intervention affects an outcome and other factors (Creswell, 2009). Internal validity threats relate to the ability to conduct the study about the population in the research, and external validity relates to the data findings in other settings and past and future situations (Creswell, 2009). Internal validity possibly presents threats based on how the study is designed, analyzed, and conducted based on the RQ (Creswell, 2009). This study

included secondary data and limited variables on how the data was collected. IPRO collected data from the MCO and monitored monthly hospitalizations and patient's mental health outpatient services. Threats to external validity include the age of the adolescent population ranging from 10-19 and gender (male and female). Mental health services are generalized to only outpatient services, including individual therapy and HCBS. No hospitalizations included only patients with mental illnesses. Peer review articles and secondary data determined the study design approach, including the state of Louisiana and CMS requirements used to determine whether the data received are reliable and valid.

Ethical Procedures

For this doctoral research, no data collection until the review of research conducted by Walden University IRB and received confirmation of approval. The researcher enforced all protection of patient data. The identity of the adolescent population was unknown in the researcher's study. The only specific patient information was age and gender. Names were not a variable used in the data collection. The research does not present ethical issues for the researcher, population, MCO, or the university.

Summary

The description of this study is in section 2, including the methodology, sampling, design, and possible threats to validity. Section 3 provides the presentation of the results and findings of the study, including the interpretation of the results and answers to the RQ after IRB approval.

Section 3: Presentation of the Results and Findings

Introduction

The purpose of this quantitative study was to determine the relationships, if any, between the independent variables mental health outpatient services, either individual therapy – a form of therapy in which the patient is treated one-on-one with a therapist and can consist of emotional or mental health needs, (Louisiana Department of Health, 2022) HCBS–Medicaid paid services rendered within the home or in community- based setting–post-hospital discharge. HCBS can consist of family support, respite care, and ILSB (Louisiana Department of Health, 2022). Other independent variables were gender of the patient and age of the adolescent patient. The dependent variable hospital readmission post- hospital discharge was defined as a patient admission to hospital within 30 days after being discharged from a previous hospital stay (CMS, 2022). Archival data from 269 adolescents were used for this study.

Research Question, What is the relationship, if any, between mental health outpatient services either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year? The related null hypothesis was, *H01*- There is no significant relationship between mental health outpatient services in Louisiana either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

This chapter begins with data preparation and cleaning of raw data including moving respondents with missing data or invalid responses. Next, I discuss univariate frequency and descriptive statistics for the study variables. To address the research question, both multiple regression and logistic regression models were created.

Data Collection and Secondary Data

Initially, 637 records were provided by the MCO to me. In reviewing the data, I removed 58 records from the study because the patient was either under 10 years old ($n = 48$) or over 19 years old ($n = 10$). In addition, 118 records were removed because of a missing service code and description. This reduced the number of records to 461. These records were aggregated based on patient identification code, which further reduced the sample to 306 patients. I removed 16 patients for outliers, and 21 patients were removed because they received both individual and group service. This resulted in a final sample of 269.

Descriptive Statistics

Table 1 displays the frequencies for selected variables. Among the patients, 52% received individual care and 48.0% received HCBS. Regarding gender, there were similar numbers of female (49.4%) and male (50.6%) patients. Hospital readmission within 30-days occurred among for 32 patients (11.9%). Table 1 includes the frequency counts for selected variables.

Table 1*Frequency Counts for Selected Variables*

Variable	Category	n	%
Service	Individual	140	52.0
	Home	129	48.0
Gender	Female	133	49.4
	Male	136	50.6
Readmission	No	237	88.1
	Yes	32	11.9

Note. $N = 269$

Table 2 displays the descriptive statistics for selected variables. Patients ranged in age from 10 to 19 years old ($M = 14.08$, $SD = 2.11$). The number of individual services ranged from zero to four services ($M = 0.62$, $SD = 0.70$). The number of home services ranged from zero to four ($M = 0.60$, $SD = 0.75$)

Table 2*Descriptive Statistics for Selected Variables*

Variable	M	SD	Low	High
Age	14.08	2.11	10	19
Number of individual services	0.62	0.70	0	4
Number of home services	0.60	0.75	0	4

Note. $N = 269$

Results

Research Question

What is the relationship, if any, between mental health outpatient services either individual therapy or HCBS post hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year? The related null hypothesis, there is no significant relationship between mental health outpatient services

in Louisiana either individual therapy or HCBS post hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. To address this question, Table 3 provides the relevant multiple regression model while Table 4 provides the relevant logistic regression model.

Table 3, the three-variable multiple regression model (age, gender, and service) was not significant ($F [3, 265] = 0.34, p = .80, R^2 = .004$). Inspection of the individual beta weights found none of the three predictors to be related to 30-day readmission. Table 2 includes, the combination support to retain the null hypothesis and reject the alternative hypothesis.

Table 3

Multiple Regression Model Predicting Readmission

Variable	B	SE	β	p	VIF
Intercept	0.17	0.17		.33	
Age	0.00	0.01	-.02	.81	1.09
Gender	-0.03	0.04	-.05	.42	1.08
Type of service	0.02	0.04	.04	.57	1.02

Note. $N = 269$. Full Model: $F (3, 265) = 0.34, p = .80, R^2 = .004$. Durbin-Watson = 2.09.

Gender variable was 1 = *Female* and 2 = *Male*. Type of service variable was 1 = *Individual* and 2 = *Home*.

Table 4, the three-variable logistic regression model (age, gender, and type of care) was not significant ($\chi^2 [3, N = 269] = 1.04, p = .79$). Inspection of the individual odds ratios found none of the three predictors to be related to 30-day readmission. Table 1, base classification rate, 88.1% based on the original rate of readmission, while the final classification rate was also 88.1%. Table 4 combination of findings provided support to retain the null hypothesis and reject the alternative hypothesis.

Table 4*Logistic Regression Model Predicting Readmission*

Variable	B	SE	p	OR	95% CI	
					Low	High
Age	-0.02	0.09	.81	0.98	0.81	1.18
Gender	-0.32	0.39	.42	0.73	0.34	1.58
Type of care	0.22	0.38	.57	1.24	0.59	2.63
Constant	-1.54	1.65	.35	0.21		

Note. $N = 269$. Full Model: $\chi^2(3, N = 269) = 1.04, p = .79$. Base classification rate =

88.1%. Final classification rate = 88.1%. Cox and Snell $R^2 = .004$. Nagelkerke $R^2 = .007$.

Gender variable was: 1 = *Female* 2 = *Male*. Type of care variable was: 1 = *Individual*

2 = *Home*

Summary

In summary, this archival data from 269 patients was used to determine the relationship, if any, between the independent variables, mental health outpatient services either individual therapy– a form of therapy in which the patient was treated on one-on-one basis with a therapist, that can consist of emotional or mental health needs, (Louisiana Department of Health, 2022) or HCBS post- hospital discharge which Medicaid paid services rendered in a home or a community-based setting. HCBS consist of family support, respite care, and ILSB (Louisiana Department of Health, 2022). Table 3 and 4 includes primary research identifying hypothesis was not supported. In the final chapter, these findings compared to the literature, conclusions and implications will be drawn, and a series of recommendations will be suggested.

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

Introduction

The purpose of this quantitative retrospective research study was to examine the relationships, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. The focus was on mental health outpatient services post-hospital discharge and the relationship between the number of hospital readmissions over 1 year. The findings may inform Louisiana Medicaid administrators and MCO leaders of relationships between mental health services, gender of the patient, age of the adolescent patient and hospital readmissions which may spark the development of quality measures (see Feng et al., 2017).

Interpretation of Findings

The findings demonstrated no significant relationship between mental health outpatient services in Louisiana, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. The research question independent variables were mental health outpatient services post-hospital discharge, gender of the patient and age of the adolescent patient and these did not predict hospital readmissions. Future research should include other variables, such as diagnosis, severity of diagnosis, and number of prior hospitalizations. Both multiple regression and logistic regression were created. The multiple regression was not significant at the $p = .80$ level. The logistic regression model was not significant at the $p = .79$ level. The combination of multiple and logistic

regression proposed that the outcome variable were similar. Initially, I chose multiple regression, but the outcome variables in this study ended up being readmitted (yes/no), which necessitated logistic regression. There was insufficient statistical evidence to support the alternative hypothesis. Current literature shows that other factors can contribute to increase in hospital readmissions for adolescent patients – not just the relationship with mental health outpatient services. The quantitative retrospective research design of this study allowed the use of secondary data from the 2020 IPRO annual external quality review technical report and MCO data to test for a relationship between the independent variables and the dependent variable.

The increase in hospital readmissions signals gaps in quality of care. According to Gao (2021), of the millions of Medicare hospitalizations per year, 1 in 5 patients are readmitted within a month of discharge and return to the emergency department due to inadequate discharging and poor coordination of care between the hospital and community-based care or MCO coordination. The theoretical framework for this quantitative retrospective research, was TCM which was appropriate as the goal is to decrease the number of hospital readmissions and reduce the state costs. An essential part of the model is the involvement of mental health professionals and outpatient services that identify patients' behavioral changes and responsibilities of aftercare post-discharge (see Rezapour-Nasrabad, 2018).

Limitations of the Study

This study on potential predictors of hospital readmissions among adolescent populations has some research limitations. In this study, the research question was focusing on

examining the relationship, if any, between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. The analysis of this study indicated no significant relationship between the variables of age, gender, and mental health outpatient services for adolescent patients.

There is limited literature on Medicaid-funded services concerning hospital readmissions. More research has been focused on chronic diseases among Medicaid patients and not mental health services among Medicaid. Other limitations with secondary data could be the accurate data of mental outpatient services rendered for follow-up care after discharge of hospital readmissions and the prior number of hospitalizations.

Recommendations

This study presents opportunities to review several factors contributing to hospital readmissions in Louisiana for adolescent population. The focus is on the adolescent participation in the environment with mental outpatient services and coordination of services to address the patient treatment. Secondary data on practitioners level of education that provide the quality of services in Louisiana Medicaid contract. Findings could contribute to promoting further the coordination of mental health education for adolescents to understand the diagnosis and treatment. According to Radez et al., (2021), adolescents do not seek and access professional help for mental health services due to many factors; the themes/barriers identified in their study were social factors, factors related to building a relationship with the mental health professional, personal individual

factors, and systemic and structural factors. The additional information can provide an open space for adolescents to choose from outpatient services.

Secondary data collected over the years for comparison of the ACA and Medicaid expansion can provide additional insights into the strengths and benefits of the targeted population. Identifying the increase or decrease of changes in data can provide areas of improvement or lack of progress, such as rendering services post-hospital discharge. As specified in this study, there is no significant relationship between mental health outpatient services in Louisiana, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year.

Implications for Professional Practice and Social Change

This study's findings demonstrate no significant relationship between mental health outpatient services in Louisiana, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. The literature review of this study supports the existing research on mental health outpatient services, age of adolescent patients, and hospital readmissions. There is limited research on relationships between mental health outpatient services and hospital readmissions; more attention has focused on other factors such as incentives, and financial contributions targeting Medicaid patients (Gao,2021).

The findings of this study contribute to the knowledge based on the relationship between mental health outpatient services and hospital readmissions. Research of this study is limited; it can be beneficial to Medicaid concerning the adolescent population's

mental health outpatient services and hospital readmissions in Louisiana. This research has potential implications for positive social change due to awareness to the potential social factors contributing to treatment, reoccurrence of hospital readmissions, and type of mental health outpatient service received from the professional post-hospital discharge. The study demonstrates that there is no significant relationship between mental health outpatient services in Louisiana, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year; however further research is needed. According to Gao et al. (2018), many hospital readmissions are poor quality of care with discharge planning, poor care coordination between the hospital and community clinicians, and the need for influential longitudinal community-based care. Powerful drivers of value-based incentives, financing, and technical assistance can decrease hospital readmissions. Still, most literature focuses on resolving readmission challenges in Medicare and commercial populations (Gao, 2018).

Conclusion

In this study, I examined the relationships between mental health outpatient services, either individual therapy or HCBS post-hospital discharge, gender of the patient, and age of the adolescent patient with the number of hospital readmissions over 1 year. Examining the factors of hospital readmissions and the impact on the future of adolescents quality of psychiatric care can decrease the state of Louisiana cost and increase the adolescent population's quality of life.

References

- Berger, Z., Flickinger, T. E., Pfoh, E., Martinez, K. A., & Dy, S. M., (2014). Promoting engagement by patients and families to reduce adverse events in acute care settings: A systemic review. *BMJ Quality & Safety*, 23(7), 548–555.
<http://doi.org/10.1136/bmjqs-2012-001769>
- Brown, J., Natzke, B., Ireys, H., Gillingham, M., & Hamilton, M. (2010). State variation in out-of-home Medicaid mental health services for children and youth: An examination of residential treatment and inpatient hospital services. *Administration and Policy in Mental Health and Mental Health Services Research*, 37(4), 318–326. <https://doi.org/10.1007/s10488-009-0235-x>
- Burns, S. T., & Cruikshanks, D. R. (2018). Independently licensed counselors' connection to CACREP and state professional identity requirements. *Professional Counselor*, 8(1), 29–45. <http://doi.org/10.15241/stb.8.1.29>
- Center for Medicare and Medicaid Services. (2022). Hospital readmissions reduction program. U.S. Department of Health and Human Services.
<http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instrument/Value-Based-Programs/HRRP/Hospital-Readmission-Reduction-Program>
- Chien, C. F., Steinwachs, D. M., Lehman, A., Fahey, M., & Skinner, E. A. (2000). Provider continuity and outcomes of care for persons with schizophrenia. *Mental Health Services Research*, 2(4), 201.

- Cruz, M., & Robyn, F. C. (2001). Compliance and costs in a case management model. *Community Mental Health Journal, 37*(1), 69–77.
- Evidence Based Programs (2017). Transitional Care Model (2017)
<https://evidencebasedprograms.org/programs/transitional-care-model/>
- Gao, W., Keleti, D., Donia, T.P., Jones, J., Michael, K. E., & Gelzer, A. D. (2018). Postdischarge engagement decreased hospital readmissions in Medicaid populations. *American Journal of Managed Care, 24*(7), e200–e206.
- Kindig, D., & Stoddart, G. (2013) What is population health? *American Journal of Public Health, 93* (3), 380– 383. <http://doi.org/10.2105/ajph.93.3.380>
- Kudyba, S., & Perry, T. (2015). A data mining approach for estimating patient demand for mental health services. *Health Systems, 4*(1), 511,
<https://doi.org/10.1057/hs.2014.12>
- Haine-schlagel, R., & Walsh, N. E. (2015). A review of parent participation engagement in child and family mental health treatment. *Clinical Child and Family Psychology Review, 18*(2), 133– 150 <https://doi.org/10.1007/s10567-015-0182x>
- LaMorte, W. W. (2016, April 28). The social cognitive theory.
<http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories5.html>
- Louisiana Department of Health. (2018). What is a system of care? (2018).
<http://www.ldh.la.gov/index.cfm/subhome/49>
- Louisiana Department of Health. (2022). *Behavioral health services provider manual*.
<http://www.lamedicaid.com>

- Malla, A., Boksa, P., & Joober, R., (2020). The new wave of youth mental health Services: Time for reflection and caution. *Canadian Journal of Psychiatry*, 66(7) 616–620. <https://doi.org/10.1177/0706743720984382>
- O’Kelley, K. (2019). New employees & safety culture: A social cognitive theory perspective. *Professional Safety*, 64(2), 37–40.
- Parks, J. J., Swinfard, T., & Stuve, P. (2010). Mental health community case management and its effect on healthcare expenditures. *Psychiatric Annals*, 40(8), 415–419. <http://doi.org/10.3928/00485713-20100804-08>
- Rumsey, D. J. (2011). *Statistics for dummies*, (2nd ed). Wiley Publishing Inc.
- Schwartz, R., Del Prete-Brown, T., Pacino, H., Nisky, J., LaMarco, J., Rotuno, M., Kalnicki, C., & Rogers, J. (2016). Collaboration between managed care and mental health agency staff: Consumer satisfaction, medication compliance, psychosocial improvement and cost outcomes. *Journal of Counselor Practice*, 7(2), 78–96. <https://doi.org/10.22229/cmc294361>
- Shafer, A., (2019). Hospitalizations patterns 30 years across a statewide system of public mental health hospitals: Readmissions predictors, optimal follow up period, readmission clusters and individuals with statistically significant high healthcare utilizations. *Psychiatric Quarterly*, 90, 263–273. <https://doi.org/10.1007/s11126-019-9626-7>
- Smith, A. P. (2003). Case management: Key to access, quality, and financial success. *Nursing Economics*, 21(5), 237–40, 244

Appendix A: Permission to use The Island Peer Review Organization (IPRO) Annual
External Quality Review Technical Report

RE: Doctoral Data Agreement Signature/LDH Permission

Whitney, I just heard from LDH.

Yes - the requestor can use the publicly available EQRO reports.- anything that has IPRO's seal of approval in one of the annual technical reports is fair game)

<https://ldh.la.gov/assets/medicaid/EQRO/2021/AnnualTechnicalReport2019-2020Magellan.pdf>

<https://ldh.la.gov/assets/medicaid/EQRO/2022/AnnualTechnicalReport2020-2021MagellanFinal.pdf>

However, if additional data is requested/needed, we would need to have a better understanding of what other data would be a part of the research paper before we can grant permission