Evaluation of a Discharge Medication Assistance Program (DMAP) to Reduce Psychiatric
Readmissions
By

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Readmissions

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Abstract

Problem: Up to 29% of those with a mental illness are readmitted to a psychiatric hospital within 30 days. Hospital readmissions to inpatient psychiatric hospitals are costly, averaging $7,200 per readmission. Major challenges of inpatient psychiatric care are nonadherence to medication and transition of follow-up care upon discharge. Further limitations are experienced when the patient is without health insurance and can result in a cycle of repeated psychiatric admissions.

Project Aim: The Donabedian Model guided the primary aim of this Quality Improvement (QI) project which was to determine if a Discharge Medication Assistance Program (DMAP) at CoxHealth in Springfield, Missouri reduced the 30-day readmission rates on three inpatient psychiatric units.

Project Method: A retrospective analysis of discharge and 30-day readmission data from January 2018 through June 2018.

Findings: Patients discharged on DMAP had 12% lower readmission rates than those not on DMAP.

Clinical Implications: Psychiatric programs that provide medications to patients at discharge can reduce 30-day readmission rates.

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Readmissions

Hospital readmissions are costly problems that result from both environmental barriers and underlying inadequacies in discharge treatment planning, especially in those who have psychiatric illnesses (Kalseth, Lassemo, Wahlbeck, Haaramo, & Magnussen, 2016). Financial stress, occurrence of mental health and substance abuse disorders, medication nonadherence, and housing instability are among the leading risk factors for hospital readmissions among patients with Medicaid (Jiang et al, 2016). Providing uninsured, high-risk patients the opportunity to obtain their prescribed psychotropic medications upon discharge can help decrease psychiatric readmissions (Tomko, Ahmed, Mukherjee, Roma, Dilucente, & Orchowski, 2013).

Statement of Problem

According to the Centers for Disease Control and Prevention (CDC) (2017a), 86% of the country's $2.7 trillion annual healthcare costs are from chronic medical and mental health conditions. Nonadherence is a common contributor to avoidable health care costs, representing 3% to 10% of total United States (US) health care expenses (Iuga & McGuire, 2014). Furthermore, approximately 125,000 deaths occur annually due to nonadherence to treatment plans (Bosworth et al., 2011). Mental health problems affect 18.5% of the US population (National Alliance on Mental Illness, 2019) and up to 12.2% of individuals with mental health diagnoses are uninsured (Mental Health America, 2019). Psychotropic medications are thought to be 75% effective when taken as prescribed (Sparks, 2015), however, when the affordability of medications is a factor, nonadherence is likely to be the result.

Nonadherence in treatment plans and/or medications often leads to emergencies, resulting in emergency room (ER) visits. The number of ER visits involving psychiatric complaints is 5

million per year (CDC, 2017b). More than 20% of all patients who presented to the ER that were hospitalized reported to be non-adherent with their medications at time of admission, with covariates including age, payment source, and primary diagnosis (Heaton, Tundia, & Luder, 2013). Medication adherence is an important problem that needs to be addressed and which would likely reduce hospital readmissions. Although there are several factors required to help an individual become or remain stable upon discharge from an inpatient psychiatric unit, ensuring patients have their prescribed medications may be a missing link to effective discharge planning. Medication assistance upon discharge could furthermore reduce readmission rates, especially for those patients who are uninsured.

Background and Significance of Problem

In 2016, 8.6% of Americans were uninsured, which fell from 9.1% in 2015 (U.S. Census Bureau, 2017). While the number of uninsured Americans continues to decrease, approximately 12.2% of adults with mental illnesses remain uninsured (Mental Health America, 2019). Despite not having health insurance, many patients will seek medical attention when needed. US hospitals provide the majority of uncompensated care. According to the American Hospital Association (AHA) (2018), as of 2016, the cost of uncompensated care accounted for $38.8 billion, up from $35.7 billion in 2015.

Many barriers to mental health care result in increased ER visits and psychiatric hospitalizations. Approximately 10% of patients who visit the ER have a diagnosed psychiatric illness. Furthermore, it is estimated that 45% of patients who present to the ER with a mental health symptom have not been diagnosed with a psychiatric diagnosis (Zun, 2016). The cost of ER visits vary based on treatments completed, with an average cost ranging from $1,233 to $2,168 (Caldwell, Srebotnjak, Wang, & Hsia, 2013), not to mention the cost of an inpatient

psychiatric hospitalization, if warranted. Common barriers to treatment that can result in ER visits include financial strains, difficulty finding a primary care provider, lack of transportation, and embarrassment of having a psychiatric diagnosis (Abar, Holub, Lee, DeRienzo, & Nobay, 2017). Furthermore, visits involving psychiatric complaints are causing overcrowding in many ERs. Increased boarding times in the ERs are a result of limited psychiatric resources and increased demand for inpatient psychiatric placements (Hamilton et al., 2016).

Once admitted to a psychiatric unit, the multidisciplinary team typically includes a variety of consultants and providers (i.e., psychiatrists, mental health nurses, social workers, pharmacists, occupational and recreational therapists). These teams work in tandem to create an individualized treatment plan for each patient (Mattinson & Cheeseman, 2018). Nonadherence to pharmacological and therapeutic plans commonly results in decreased success rate of treatment, increased morbidity, and increased healthcare costs (Virgolesi et al., 2017). As nonadherence accounts for 20 to 60% of this patient population, a common focus of inpatient hospitalizations is medication education (Mert, Turgut, Kelleci, & Semiz, 2015).

Planning for discharge follow-up during the acute hospitalization is important not only to decrease hospital readmissions, but also for management of symptoms. Follow-up planning commonly includes scheduling outpatient appointments (Smith et al., 2017) and making referrals for therapy, such as psychotherapy, family psychoeducation, and pharmacotherapy (Brunette et al., 2016). Establishing transition to substance abuse treatment centers is also facilitated when appropriate (Reif, Acevedo, Garnick, & Fullerton, 2017). Unfortunately, only 30% of those discharged from inpatient facilities are adherent to their outpatient follow-up plan (Roque, Findlay, Okoli, & El-Mallakh, 2017). When discharged from an inpatient psychiatric hospital, the chance of a readmission within 30 days is approximately 29% (Heslin & Weiss, 2015).

Therefore, it is important for the interdisciplinary team to ensure resources upon discharge are being completed to reduce the "revolving door" effect.

Since readmission rates to inpatient psychiatric units are high and expensive, research to reduce psychiatric readmissions must focus on a variety of programs. One intervention found useful to reduce readmissions is medication education (Hume & Tomsik, 2014). Postal appointment reminders (Habit, Johnson, & Edlund, 2018) and follow-up telephone calls (Marcus, Hautala, & Allaudeen, 2018) are other interventions used. Still another intervention is a combination of home visits and follow-up telephone calls (Malakouti et al., 2016). Finally, access to patient navigators and assertive community treatment (ACT) teams following discharge decrease readmission rates (Akerle, et al., 2017). However, research is limited regarding the barriers uninsured patients face in efforts to obtain their medications upon discharge from the hospital. Patients with mental illnesses are at high risk for hospital readmissions due to the probability of having comorbidities, including diabetes and heart disease (Gopalan, 2018).

Purpose

The purpose of this quality improvement (QI) project was to determine if a Discharge Medication Assistance Program (DMAP) at CoxHealth in Springfield, Missouri reduced the 30-day readmission rates on three inpatient psychiatric units.

Discharge Medication Assistance Program (DMAP) at CoxHealth

In 2013, development of a psychiatric discharge medication assistance program (DMAP) was proposed at CoxHealth (D. Harbin, Administrative Director of Psychiatric Services, personal communication, June 27, 2018). The purpose of DMAP is to provide a 30-day supply of discharge medications for those patients who lack health insurance. The source of funding for DMAP is primarily grants and donations from CoxHealth. Knowing that individuals who have

limited finances and lack of insurance coverage are high risk for readmissions, the goal of the program was estimated to reduce both psychiatric and medical readmissions by 20%. The aim of the program was to make the transition to aftercare easier for the patient by providing a 30-day filled prescription to those who qualified for DMAP (D. Harbin, personal communication, June 27, 2018).

At CoxHealth, readmission is defined when an individual returns to the hospital after 30 days of discharge from a CoxHealth facility. Exceptions to this definition are individuals who left against medical advice, mortalities, length of stay greater than one year, transfers to other acute-care facilities, chemotherapy visits, radiotherapy visits, those readmitted for dialysis, rehabilitation visits, and elective or planned admissions (D. Parrish, CoxHealth Business Analyst, personal communication, September 18, 2018). Prior to initiating DMAP in 2013, approximately 16.5% of all admissions to CoxHealth were readmissions. However, according to D. Harbin, it was suspected that this number was underreported and may actually have been closer to 20 to 25% (personal communication, June 27, 2018). The expense of providing 30-days worth of medications at no cost was thought to save CoxHealth more than the expense of a readmission according to D. Harbin (personal communication, June 27, 2018).

Staff psychiatrists prescribe medications on the DMAP formulary for those who qualify. In order to qualify for the DMAP, a patient must have no health insurance, be ineligible for Medicaid and fall 200% or less below the federal poverty level. When a patient is ready for discharge, social workers determine if the patient qualifies for DMAP by completing the DMAP form (Appendix A). The medications not covered on the DMAP include controlled substances, over-the-counter medications, or pre-admission medications. Furthermore, individuals may only utilize DMAP once every 90 days for a total of three times in a lifetime and can only receive up

to a 30-day supply of the medication. The exception is antibiotics, which can be filled in full. All alternative resources, such as online coupons and generic substations, are utilized prior to using the DMAP funds. In cases when a patient is not eligible for Medicaid, caseworkers provide DMAP and assist patients with a Medicaid application. All patients who receive DMAP are provided with an outpatient referral for ongoing medication follow-up.

The DMAP formulary (Appendix B) consists of both medical and psychiatric medications provided through the CoxHealth Pharmacy. The DMAP medications are at a set co-pay, and discounted to those who qualify, to either a $5 co-pay per prescription, or a $30 co-pay per prescription. CoxHealth pays for these co-pays; therefore, patients discharged on DMAP do not pay anything for the program (D. Harbin, personal communication, June 27, 2018).

DMAP participation is completely voluntary. If the individual opts into the program, the DMAP forms are completed by the social worker and the prescriptions and DMAP form are faxed to the CoxHealth Pharmacy for the medications to be filled. The patient completes the discharge process with the nurse and psychiatric technicians. The nurse discharging the patient provides medication education related to the DMAP medications, including reason for taking the medication(s), dosage amounts, and times to take the medication(s), along with management of possible side effects. When the patient has completed the discharge process, they are directed to the pharmacy where they pick up their prescribed medications (D. Harbin, personal communication, June 27, 2018). Since it's inception, the DMAP program has never been evaluated for its ability to reduce readmissions, thus, the need for this study.

Methods for Literature Review

Databases used for this literature search included Cochrane Databases, MEDLINE, PsychINFO, PubMed, CINAHL, and Google Search. Keywords included mental health,

psychiatry, psych*, discharge planning, discharge programs, hospital discharge, readmission, hospital readmissions, patient readmission, discharge, discharge medications, medication programs, and follow-up. The reference lists for systematic reviews of related studies were reviewed for additional relevant articles. The criterion that was included was any program where medications were given to patients upon discharge from an acute setting and outcomes related to hospital readmissions. All study designs were included in the search. Studies written in English but completed in a country outside of the US were also included. Article exclusion criteria were studies with participants less than 18 years of age and research that did not discuss outcomes on readmission rates from an acute setting. The search was limited to the past 5-years of publication. The number of studies examining readmission rates among those discharged from an inpatient psychiatric unit who received a 30-day filled prescription of their medications is limited; therefore, the literature review included all programs in which individuals who received medications in an acute setting were used to determine how the program affected 30-day readmissions.

Review of Literature

Upon completion of a literature review, there were a limited number of studies found that examined 30-day readmission rates after providing medication assistance upon discharge. Tomko et al. (2013) completed a 12-month retrospective study including 504 adult hospitalized psychiatric patients over the age of 18. Depending on their medication coverage and risk for suicidality, the patients were provided a 30-, 15-, or 7-day supply of psychiatric medications coupled with pharmacist-led medication counseling. The patients who were without health insurance, which accounted for less than 2% of the study participants, were given a 14-day filled prescription funded by charitable donations. The hospital pharmacy filled and delivered the

medications to the psychiatric unit before the patient was discharged. In addition, the pharmacist met with the patient individually on the day of discharge to discuss medication identification and uses, potential side effects, and management of side effects. Thirty-day hospital readmissions were significantly reduced in the study group compared to total readmissions (Tomko et al., 2013)

Akerle et al. (2017) reported a 27% reduction in 30-day psychiatric readmissions when patients participated in an intervention program to improve the transition from inpatient care to outpatient follow-up services. This retrospective study included 1,707 patients from an inpatient psychiatric unit and was evaluated over a period of 12 months. The patients, aged 18 to 65 years, had their medications delivered from the pharmacy to the psychiatric unit on the day of discharge. The patients were responsible for the cost of their medications. An additional component of this program included a follow-up phone call to the patient within 72 hours of discharge. The purpose of the telephone call was to assess clinical status, medication review, and an understanding for aftercare, including scheduled appointments. The patient was also offered a patient navigator to follow their progress for 30-days post-discharge. The patient navigator provided information on community based services, telephone calls 24 hours prior to their first outpatient appointment, weekly phone calls to check in, and problem solving assistance within the 30-days post discharge (Akerle et al., 2017).

In a study by Blee, Roux, Gautreaux, Sherer and Garey (2015), free inhalers were provided to uninsured patients diagnosed with chronic obstructive pulmonary disease (COPD) on the medical units. This study implemented a multidose medication dispensing on discharge service and compared the readmission rates prior to implementing these services. The study was planned to be implemented over a 12-month period but due to a substantial decline in

readmissions, the study was stopped early. Hospital pharmacists were notified of patients who were admitted and prescribed COPD medications. The pharmacists then provided counseling to patients on their COPD medication within 48 hours of discharge.

A fourth study by Comer et al. (2017) found that by offering a discharge prescription program to patients on medical units resulted in a 16% decrease in 30-day hospital readmissions over a 23-month period. Within 24-hours of admission to the unit, the patients were presented with the opportunity to participate in the program. Those who participated were able to pick up their filled medications as apart of their discharge process. Similar to Comer et al. (2017), Kirkham, Clark, Paynter, Lewis and Duncan (2014) completed a 24-month retrospective study in which participating patients were delivered their medications to the medical unit hours prior to discharge. However, in this study, the hospital pharmacist provided the patients follow-up phone calls within 72 hours of discharge. The pharmacist assessed compliance, problems, and understanding of the medications they were discharged on. The patients who participated in this study had lower rates (5%) of 30-day readmissions compared to those who received standard care (9.5%) (Kirkham et al., 2014).

The final study from the literature review was by Shull, Braitman, Stites, DeLuca, and Hauser (2018). This study resulted in a 10.6% reduction of 30-day readmissions by providing a Medication REACH (Reconciliation, Education, Access, Counseling, Healthy Patient at Home) Intervention compared to patients who did not participate. This intervention was completed over a 12-month period to patients on a medical unit. The average age of patients was 65 years old. The Medication REACH Intervention was a pharmacist-led program providing the patient with educational sessions while in the hospital, ensuring the prescription was ready for pickup at time

of discharge, providing the patient with a follow-up phone call within 72 hours of discharge, and offering the patient home visits (Shull et al., 2018).

In conclusion, all six studies found a reduction in 30-day readmission rates by providing patients with medications at discharge. Only two of the studies used medication assistance programs on psychiatric units. The other four studies were with patients discharged from medical units. In both of the studies with psychiatric hospitalizations, other support services were provided in addition to providing filled prescriptions upon discharge. One of the studies provided extensive outpatient support services to reduce 30-day readmissions (Akerle et al., 2017) and the other utilized pharmacy-led medication counseling in addition to providing filled prescriptions upon discharge (Tomko, et al., 2013).

Project Aims

The primary aim of this Quality Improvement (QI) project was to determine if the Discharge Medication Assistance Program (DMAP) at CoxHealth in Springfield, Missouri reduced the 30-day readmission rates on three inpatient psychiatric units.

Project Questions

1. Do patients discharged from the adult and senior adult psychiatric units at CoxHealth who participated in the DMAP program have a lower incidence of 30-day readmission rates than those discharged from the adult psychiatric units at CoxHealth who didn't participate in DMAP during the same time frame?

2. What are the demographic characteristics (age and gender) and discharge diagnoses of those patients who were discharged on DMAP and were readmitted to the adult and senior adult inpatient psychiatric units within 30-days?

Theoretical Framework

The theoretical framework that guided this project was the Donabedian Model. Avedis Donabedian developed the Model in 2005, which is a model to improve patient outcomes by improving clinical processes. Three processes are used to evaluate the quality of healthcare— structure, process, and outcome (Donabedian, 2005). The Donabedian Model has been found to be a useful framework in QI projects.

Donabedian defines the structures as the physical and organizational healthcare settings where care takes place (Donabedian, 2005). In this case, the setting was the two inpatient adult psychiatric units and one senior adult psychiatric unit at CoxHealth. The processes are defined as the mechanisms, service, or intervention of the care being delivered (Donabedian, 2005). In this project, the process was the provision of a 30-day supply of medication upon discharge (DMAP), from two adult and one senior adult inpatient psychiatric unit for patients who had no health insurance. In addition, the process of nurse-provided medication education upon discharge to ensure the patient understands the times, dosages, and reason for taking the medication is completed. The final component of the Donabedian Model are the outcomes. Outcomes are defined as the recovery or rebuilding of condition or function (Donabedian, 2005). The outcome of this project was the 30-day readmission rates to the inpatient psychiatric units. The Donabedian Model has also been used in other studies, including projects assessing 30-day readmission rates after implementing improved communication techniques (Marteniz et al., 2018) and for chronic obstructive pulmonary disease management programs (Henry, Man, & Fung, 2013).

Methodology

Design

The design of this QI project was a retrospective review of the discharge data from the EHRs of patients discharged from three CoxHealth psychiatric units. Descriptive statistics were completed to compare data and evaluate the demographics.

Institutional Review Board

Approval for this QI project was received from University of Kansas Medical Center (KUMC) Institutional Review Board (IRB). Once approved by KUMC, the project was submitted to the Human Rights and Protection Council (HRPC) at CoxHealth. The HRPC at CoxHealth requested that KUMC act as the primary IRB. The project began when both approvals were authorized. This project was considered exempt status since it was a minimal risk, non-interventional, chart review without human participants. The de-identified report was kept on a password-protected computer and emailed to the primary investigator (PI) using KUMC's Secure File Transfer. The Health Insurance Portability and Accountability Act (HIPPA) privacy guidelines for data sharing were followed. Upon project approval, collecting and analyzing the data was preformed through March 2019.

Setting

The setting for this project was three inpatient psychiatric units at CoxHealth. Managerial permission was given to the author by the Administrative Director of Psychiatric Services to conduct data collection on the psychiatric units at CoxHealth (Appendix C). CoxHealth is a not-for-profit health system located in Springfield, Missouri. CoxHealth provides comprehensive healthcare services, including behavioral health and medical services. There are four psychiatric units at CoxHealth: A child/adolescent unit for children under age 18, two adult units ages 18 to 49 years old, and a senior adult unit, ages 50 years and above.

Sample

The sample for this project was the discharge data of those patients who were discharged from two adult inpatient psychiatric units and the senior adult unit at CoxHealth from January 2018 through June 2018. The child and adolescent patients were excluded from the study because DMAP is specifically for patients aged 18 and older.

Data Collection

The author created an Excel spreadsheet (Appendix D) which included age, gender, discharge and readmission diagnosis, the unit they were discharged from (identified as "F200" [Adult II Inpatient Psychiatry Unit], "F300" [Adult I Inpatient Psychiatry Unit], or "C200" [Senior Adult Inpatient Psychiatry Unit]) and the number of days between discharge and readmission for each DMAP patient. Permission to access the de-identified data to make comparisons was approved (Appendix E), which allowed the CoxHealth Data Analytics to complete the retrospective report, enter the data into the Excel spreadsheet (Appendix D), and provide it to the author.

Data Analysis

Upon receiving the de-identified report, the project was evaluated to determine if DMAP participation reduced the 30-day readmission rates on the three CoxHealth inpatient psychiatric units by comparing the discharge and readmission rates of all patients from the three inpatient units with those of the DMAP patients. Descriptive statistics were calculated as the percentage of total 30-day psychiatric readmissions, which were compared to the percentage of 30-day psychiatric readmissions for DMAP participants.

The gender of patients who received DMAP and was readmitted was calculated as a percentage. The age range of individuals discharged on DMAP and readmitted within 30-days was calculated and presented as means and in interval categories. Psychiatric readmissions were

categorized according to the unit the patient was discharged from. The discharge and readmitting diagnoses were analyzed and arranged based on the frequency of diagnoses seen upon discharge. Finally, the days between discharge and readmission were provided as a range and mean for every readmitted patient. This information is presented in a table format.

<div align="center">**Results**</div>

The purpose of this quality improvement project was to evaluate the 30-day readmission rates of patients who participated in the Discharge Medication Assistance Program (DMAP) upon discharge from the adult and senior adult inpatient psychiatric units at CoxHealth in Springfield, Missouri. The number of readmission rates of DMAP patients were compared to non-DMAP patients discharged over a 6-month period from January 1, 2018 to June 30, 2018. The following section presents the findings from the two research questions.

Research Question 1

The first research question in this QI project was, *Do patients who were discharged on DMAP from the adult and senior adult psychiatric units have a lower 30-day readmission rate than those who were not discharged on the DMAP from the same adult and senior adult psychiatric units during the same time frame?*

Analysis of all discharges from the three inpatient psychiatric units at CoxHealth during the 6-month period revealed that patients who were discharged on DMAP had lower readmission rates than patients who did not participate in DMAP. During the 6-month period between January 1, 2018 and June 30, 2018, there were a total of 1,495 discharges from the three inpatient psychiatric units. During this period there were a total of 221 (14.8%) patients readmitted within 30-days of their discharge. Out of the total readmissions during this time period, 19 (1.3%) were discharged on DMAP and 202 (13.5%) were discharged without DMAP.

The patients who were discharged without the DMAP had a 12% higher readmission rate than those patients who were discharged on the DMAP (See Table 1). In conclusion, the patients who were discharged on DMAP had a lower 30-day readmission rate than those who did not discharge on the DMAP from the same psychiatric units and during the same time frame.

Research Question 2

The second research question in this QI project was, *What were the demographic characteristics (age and gender) and discharge diagnoses of those patients who were discharged on the DMAP and readmitted to either the adult or senior adult inpatient psychiatric unit within 30-days of discharge?*

The majority of the DMAP patients who were readmitted within 30 days of discharge were men in the age range between 20 and 39 years (See Table 2). Of the 19 DMAP patients readmitted within 30-days of discharge, the most common discharge diagnosis was major depressive disorder (MDD) (52.6%). Four of the readmitted DMAP patients (21.1%) had a discharge diagnosis of a substance related disorder, and three patients (15.8%) had a discharge diagnosis of bipolar disorder. Two other diagnoses at discharge were adjustment disorder and poisoning by antiparkinsonism drugs or other central muscle-tone depressant, intentional self-harm (See Table 3).

The range of days between discharge and readmission for the 19 DMAP patients was 1 to 28 days with an average of 12.2 days. Table 3 provides the discharge and readmitting diagnosis of the 19 DMAP patients, along with the number of days between discharge and readmission. Of the DMAP patients who were readmitted, 17 patients were discharged from the two adult psychiatric units and only two patients were discharged from the Senior Adult Unit.

Discussion

This quality improvement study used the framework of the Donabedian Model to evaluate the impact of DMAP on psychiatric readmission rates at CoxHealth. With psychiatric readmissions rates on the rise, CoxHealth began taking efforts to implement DMAP. The purpose of implementing DMAP in 2013 was to provide uninsured patients a 30-day supply of their prescribed medications upon discharge with the outcome objective to reduce psychiatric readmissions. The staff at CoxHealth had never evaluated the success of this program. The administrative directors of the psychiatric units requested the author to conduct this evaluation of DMAP.

The DMAP was created to support patients who did not have health insurance and could not afford to purchase their psychiatric medications at discharge. Although the DMAP patients received their medications upon discharge, 1.3% of these patients were readmitted to the psychiatric hospital within 30-days over a 6-month period. Therefore, it can be surmised that other variables besides a lack of access to medications accounted for the DMAP patient readmissions. Due to the fact the author was unable to directly access the medical records of the patients who were readmitted within 30 days after discharge, it was difficult to investigate possible factors that contributed to the readmissions.

The author was able to obtain the diagnoses of those discharged and readmitted within 30 days. The majority of discharge and readmitting diagnoses in this project were major depressive disorders (MDD). Substance related disorders accounted for 21.1% of the discharge and 10.5% of the readmitting diagnoses. Patients with substance related disorders often have co-occurring diagnoses, including major depressive and personality disorders. These patients also face barriers transitioning into outpatient treatment programs upon discharge (Mojtabi, Chen, Kaufmann, & Crum, 2014), which is especially true for uninsured patients.

The majority of DMAP patients being readmitted were younger men. Variables that can play a factor in psychiatric readmissions may include age, gender, race, psychiatric diagnosis, history of incarceration, history of alcohol/drug abuse, number of previous inpatient hospitalizations, type of insurance, length of stay of admission, housing status, legal status (voluntary/involuntary), medication compliance, and availability of social support (Lorine et al., 2015). Fewer senior adult readmissions may have resulted from the fact that senior adults qualify for insurance benefits (Medicare), minimizing barriers to aftercare services. This protective factor may have contributed to fewer readmission compared to the adult units. In addition, the differences in readmissions between the adult and senior adult units could have been attributed to methods of discharge planning between the units. Finally, the variances between the units' readmission rates may be a reflection of staff experience and knowledge of available community resources.

The findings from this project and other studies in the literature support evidence that providing psychiatric patients with discharge medications can reduce hospital readmission rates. In the study by Tomko et al. (2013), 30-day hospital readmissions were significantly reduced in psychiatric patients who were provided their psychiatric medications, coupled with pharmacist-led medication counseling. In the Akerle et al. (2017) study, there was a 27% reduction in 30-day psychiatric readmissions when patients participated in an intervention program to improve the transition from inpatient care to outpatient follow-up services. In addition to the patients medications delivered from the pharmacy to the psychiatric unit on the day of discharge, this program included follow-up phone calls to the patient within 72 hours of discharge. A distinction in this study was the patients were offered a patient navigator to follow their progress for 30-days post-discharge (Akerle et al., 2017).

Both of the studies by Tomko et al. (2013) and Akerle et al. (2017) were similar to DMAP in that the patients were provided their medications upon discharge and received counseling from a health provider about medication management. However, in the Tomko et al. and Akerle et al. studies, patients received pharmacist-led medication counseling whereas in the DMAP program at CoxHealth registered nurses were responsible for this education. In addition, the patients in the Akerle et al. study were responsible for the cost of their medications whereas in DMAP the medications are provided for free. The Tomko et al. study had a mixed sample where some of the patients had health insurance and some did not. The DMAP is unique from the other studies reviewed in that all of the patients were without health insurance. Uninsured patients tend to have more complicated risk factors and research has found that patients without health insurance have a higher risk of hospital readmission (Hamilton et al., 2016).

The Akerle et al. (2013) study provided extensive aftercare support interventions that are lacking in the DMAP. The utilization of a patient navigator, as noted in the Akerle et al. study may be an important consideration when providing patient support after inpatient discharge. In addition, establishing collaboration with a community mental health center would provide addition services to patients upon discharge. Collectively, the participant would benefit not only by receiving their medications upon discharge, but would also have access to patient navigators once discharged from the inpatient psychiatric unit.

Strengths

This student researcher is a nurse employed at CoxHealth and has a relationship with the staff on the units where the data was collected. The student researcher was able to meet with the Administrative Director of Psychiatric Services along with the nursing research coordinator at CoxHealth to develop a quality improvement project focused on improving DMAP in the service

of reducing 30-day psychiatric patient readmission. This author has a working understanding of how the DMAP is organized and implemented.

Limitations

There were several limitations associated with this quality improvement project. The HRPC at CoxHealth would not allow this student researcher direct access to the DMAP medical records due to their policies governing protected patient health information. A member of the Business Analyst Department at CoxHealth was assigned to provide the discharge data for analysis, which limited the opportunity to explore factors contributing to patient readmissions. Second, hospital readmissions were accounted for only at CoxHealth and it is not known whether any DMAP patients were readmitted to another psychiatric hospital within a 30-day period.

Another limitation was that the data analysis was for patients discharged during a 6-month period. A longer data analysis period would result in more information to reflect relevant discharge and readmission patterns on the psychiatric units at CoxHealth. An assumption about DMAP is that providing psychiatric patients free medications upon discharge would reduce 30-day hospital readmission rates. While this program showed a reduction in readmissions, there were DMAP patients who return within 30-day. Other factors for readmissions to be considered are social determinants, such as living situation and social support. Without access to patient's the medical record, these factors cannot be correlated with the causes for early readmissions.

<p align="center">**Clinical Implications**</p>

Clinical implications from the findings of this study are evidence of a need for further explorations of the factors that contributed to a less than 30-day psychiatric readmission for those patients who received DMAP. The DMAP patients were discharged with a 30-day supply of their prescribed medications; therefore, it is unlikely that a lack of access to medications is a

reason for readmission. Determining the reason(s) for hospital readmission would require a further examination of the variables, including possible social determinants that contribute to readmissions. The development of future quality improvement projects in an effort to reduce psychiatric readmissions may be warranted if a deeper analysis of 30-day readmissions is recorded.

Clinical implications may include a need for continued monitoring and evaluation of the data related to the 30-day readmission rates of the DMAP patients. When DMAP was developed, the goal was to decrease both psychiatric and medical readmissions by 20%. In order to evaluate a decrease in hospital readmissions, collecting data over a larger time frame along with assessing medical readmissions would be suggested. If the number of readmissions continues to decrease, this data could support additional grant funding or assistance from various CoxHealth foundations to further support the DMAP program. If there is a 12% decrease in psychiatric readmissions in DMAP patients compared to non-DMAP patients, the cost savings could fund additional case management staff. Additionally, case management services can ensure that patients have appropriate psychiatric follow-up and longer-term access to medications. Case management meetings among these three units to discuss community resources for follow-up could potentially benefit to further decrease readmission rates.

The patient assistance studies in the literature provided additional intensive outpatient follow-up services to further decrease 30-day readmissions. Interventions included follow-up phone calls, medication reconciliation by a pharmacist, patient-centered education about their medication(s), collaboration with healthcare providers, and follow-up with the patient at home as needed may be considered as a future implication to improve practice and decrease hospital readmissions at CoxHealth. The results of this project, interventions from the literature, and

recommendations to further reduce psychiatric readmissions will be presented to the CoxHealth Administrative Director of Psychiatric Services and program staff. There will be an emphasis on sharing information with case management who are primarily responsible for discharge planning. Providing a presentation of this project and information gleaned from literature may improve the delivery of healthcare at CoxHealth while further reducing psychiatric readmissions and improving patient outcomes.

Conclusion

Programs focusing on high-risk populations are being implemented to help reduce costly readmission rates. Patients without health insurance are more prone to experience barriers to follow-up care. Identifying ways to overcome these barriers is vital in decreasing potential for readmissions. Medication assistance upon discharge has been found to reduce hospital readmissions. Interventions that have also been used include follow-up phone calls, home visits, access to hospital pharmacists, and collaboration with outpatient providers. All the aforementioned could be utilized by inpatient psychiatric facilities, including CoxHealth to further reduce readmission rates. This project was completed to determine the impact of DMAP on 30-day readmission rates to three inpatient psychiatric unit at CoxHealth. Incorporating additional interventions with medications upon discharge may be a prospective solution to the continuation of minimizing readmissions.

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Table 1

DMAP Participant Readmission Information

30-day Readmission Rates Between 1/1/18-6/30/18	Frequency/Percentage	Total discharges (n=1,495)
Total readmissions	221 (14.8%)	
DMAP readmissions	19 (1.3%)	
Non-DMAP readmissions	202 (13.5%)	

Table 2

Demographic of Readmitted DMAP Patients

Demographics (N=19)	Frequency/ Percentage	Total discharges (n=1,495)
Gender of DMAP patients readmitted within 30-days	16 (84.2%) male	
	3 (15.8%) female	
		Range
Age range of DMAP patients readmitted within 30-days	6 (32%)	20-29
	8 (42.1%)	30-39
	3 (15.7%)	40-49
	2 (10.5%)	50-59

Table 3

Primary Discharge and Readmitting Diagnosis of the DMAP Patients (N=19) and Number of

Days between Discharge and Readmission

Primary Discharge Diagnosis	Readmission Primary Diagnosis	# of days between discharge and readmission
MDD	MDD	1
MDD	MDD	1
MDD	MDD	1
MDD	MDD	5
MDD	MDD	6
MDD	MDD	9
MDD	MDD	11
MDD	MDD	19
MDD	MDD	23
MDD	Alcohol Dependence	1
Bipolar	Bipolar	23
Bipolar	Bipolar	24
Bipolar	Schizoaffective Disorder[*]	19
Alcohol Dependence	Alcohol Dependence	24
Substance Abuse Disorder	Adjustment Disorder[2]	1
Substance Abuse Disorder	MDD	9
Substance Abuse Disorder	MDD	22
Adjustment Disorder[1]	MDD	28
Poisoning by antiparkinsonism drugs or other central muscle-tone depressant, intentional self-harm	MDD	6

Note. MDD=Major Depressive Disorder, with- or without psychosis or unspecified; Substance Abuse Disorder includes stimulant abuse with stimulant included psychiatric disorder with hallucinations or with mood disorder; Adjustment Disorder[1]=Adjustment disorder with mixed disturbance of emotions and conduct; Adjustment Disorder[2]=Adjustment disorder with mixed anxiety and depressed mood; Schizoaffective Disorder*=Schizoaffective disorder, bipolar type.

Appendix A

Discharge Medication Assistance Program (DMAP) Form

CoxHealth

COXHEALTH PSYCHIATRIC SERVICES
DISCHARGE MEDICATION ASSISTANCE PROGRAM (DMAP) FUND
Authorization form for Discharge Medication Purchase
(Fax completed form to Convenient Care Pharmacy North 69-8888)

Approval Guidelines:
- The Medication Assistance fund is for self-pay inpatients that have no resources to purchase needed prescription medications. **Purchases by this fund should always be as a last resort**.
- Outpatients and patients being discharged from the ED do not qualify for assistance through this program.
- Antibiotics are filled in full. Other medication may be filled up to a 30-day supply – no refills. Generics will be used when possible. No controlled substances are eligible.
- This fund will not cover co-pays, over-the-counter or pre-admission medications.
- Patient has not accessed this fund in 90 days. Patient has not accessed this fund more than 3 times.

Date of Request: _____Patient Name: _____DOB: _____
Address: _____City: _____State: _____Zip: _____
Phone#: _____ Primary DX: _____

Confirm all of the following before authorizing purchase by the Medication Assistance Fund:

Patient has <u>no</u> coverage of any kind for medications. In addition to having no payment sources, all possible alternative methods for decreasing cost or obtaining this medication have been exhausted. *Examples of alternatives to use of this fund include:* 1) generic substitution, 2) talk with unit pharmacist to get a recommendation for a less costly equivalent medication 3) Online coupons.
Resources Contacted:

1.	
2.	
3.	

HumanArc has screened and found patient not eligible for Medicaid, proceed with authorization.
1. If not screened yet, refer to HumanArc – do not authorize.
2. CCP will accept Medicaid pending as a payer source. *(Utilize Medicaid Pending Med Authorization form)*

Patient's FPL is 200% or less. If not, patient *does not* qualify for assistance. Do not authorize.
Number of people living in household: _____ Total monthly income: $_____
or Annual income: $_____

200% Federal Poverty Levels (FPL)		
Household Size	Monthly Income Limit	Annual Income Limit
1	$1,915	$22,980
2	$2,585	$31,020
3	$3,255	$39,060
4	$3,925	$47,100

Patient referred to CMAP for chronic medication assistance.

Outpatient referral for ongoing medication follow up: _____

(name of provider)

Patient Name:_____ Anticipated Discharge Time:_____

Authorized Medications:

Discharging Medication	Dosage	Quantity	Price DMAP formulary is $5. All other meds call CCP for pricing	Patient Co-Pay (Suggested not required)
1.			$	
2.			$	
3.			$	
4.			$	
5.			$	
6.			$	
7.			$	
Total			$	

F1   F2   F3   C2   MSW Phone:_____ Fax:_____

(*circle unit*)

▶ **MSW Approval only (up to 5 medications maximum or $30 total maximum):**
Signature: _____ Print Name: _____

▶ **Unit Manager/AUM Approval (6 medications or more up to $150):**
Signature: _____ Print Name: _____

▶ **Administrative Director Approval (Total price greater than $150):**
Signature: _____ Print Name: _____

Appendix B

Medications Covered by DMAP

DMAP FORMULARY	
Tier 1	
Updated 8-18-2017	
	Quantity Authorized
Allergies/Cold and Flu	
Benzonatate 100mg cap	15
Benzonatate 200mg cap	15
Cetiriizine 10mg tab	30
Loratadine 10mg tab	30
Promethazine DM syrup	180mL

Antibiotics	
Amoxicillin 250mg cap	30
Amoxicillin 500mg cap	30
Cephalexin 250mg cap	30
Cephalexin 500mg cap	30
Ciprofloxacin 250mg tab	20
Ciprofloxacin 500mg tab	20
Penicillin VK 250mg tab	28
Penicillin VK 500mg tab	14
SMZ-TMP 400mg-80mg tab	30
SMZ-TMP DS 800mg-160mg tab	20

Antifungals	
Fluconazole 150mg tab	1
Terbinafine 250mg tab	30

Antivirals	
Acyclovir 200mg cap	30
Acyclovir 400mg cap	30
Acyclovir 800mg cap	15

Arthritis/Pain	
Allopurinol 100mg tab	30
Allopurinol 300mg tab	15

Baclofen 10mg tab	30
Cyclobenzaprine 5mg tab	30
Cyclobenzaprine 10mg tab	30
Diclofenac DR 50mg tab	15
Diclofenac DR 75mg tab	15
Ibuprofen 400mg tab	60
Ibuprofen 600mg tab	60
Ibuprofen 800mg tab	30
Indomethacin 25mg cap	30
Indomethacin 50mg cap	15
Meloxicam 7.5mg tab	30
Meloxicam 15mg tab	30
Naproxen 375mg tab	60
Naproxen 500mg tab	60
Prednisone 2.5mg tab	30
Prednisone 5mg tab	30
Prednisone 10mg tab	30
Prednisone 20mg tab	15

Asthma	
Albuterol 0.083% nebulizer soln (25x3ml vials)	75

Cholesterol	
Gemfibrozil 600mg tab	30
Lovastatin 10mg tab	30
Lovastatin 20mg tab	30
Lovastatin 40mg tab	30
Pravastatin 10mg tab	10
Pravastatin 20mg tab	10
Pravastatin 40mg tab	7
Simvastatin 5mg tab	30
Simvastatin 10mg tab	30
Simvastatin 20mg tab	30
Simvastatin 40mg tab	30
Simvastatin 80mg tab	30

Diabetes	
Glimepiride 1mg tab	30
Glimepiride 2mg tab	30
Glimepiride 4mg tab	15

Glipizide 5mg tab	30
Glipizide 10mg tab	30
Glyburide 2.5mg tab	30
Glyburide 5mg tab	15
Glyburide/Metformin 2.5mg/500mg tab	30
Metformin 500mg tab	90
Metformin 850mg tab	60
Metformin 1000mg tab	60
Metformin 500mg ER tab	60

External	
Lidocaine 2% viscous solution (100mL bottle)	100mL

GI	
Dicyclomine 10mg cap	60
Dicyclomine 20mg tab	60
Famotidine 20mg tab	30
Famotidine 40mg tab	30
Lactulose syrup	240mL
Loperamide 2mg cap	15
Metoclopramide 10mg tab	60
Omeprazole 20mg cap	30
Omeprazole 40mg cap	15
Prochlorperazine 10mg tab	30
Promethazine 25mg tab	30
Ranitidine 150mg tab	60
Ranitidine 300mg tab	30

Eyes	
Gentamicin 0.3% op. soln (5ml bottle)	5mL
Timolol Maleate 0.25% op. soln (5ml bottle)	5mL
Timolol Maleate 0.5% op soln (5ml bottle)	5mL

Heart/Blood Pressure	
Amiodarone 200mg tab	30
Amlodipine 2.5mg tab	30
Amlodipine 5mg tab	30
Amlodipine 10mg tab	30
Atenolol 25mg tab	30
Atenolol 50mg tab	30

Atenolol 100mg tab	30
Atenolol-Chlorthalidone 100mg/25mg	15
Benazepril 20mg tab	30
Benazepril 40mg tab	30
Bisoprolol-HCTZ 5mg-6.25mg tab	30
Bisoprolol-HCTZ 10mg-6.25mg tab	30
Carvedilol 3.125mg tab	60
Carvedilol 6.25mg tab	60
Carvedilol 12.5mg tab	60
Carvedilol 25mg tab	60
Cilostazol 100mg tab	30
Clonidine 0.1mg tab	30
Clonidine 0.2mg tab	30
Clonidine 0.3mg tab	30
Diltiazem 60mg tab	15
Diltiazem 90mg tab	15
Diltiazem 120mg tab	15
Enalapril 20mg tab	15
Enalapril-HCTZ 10mg-25mg tab	30
Flecainide 50mg tab	15
Furosemide 20mg tab	30
Furosemide 40mg tab	30
Furosemide 80mg tab	30
Guanfacine 1mg tab	30
Guanfacine 2mg tab	30
Hydralazine 10mg tab	30
Hydralazine 25mg tab	30
Hydrochlorothiazide(HCTZ)12.5mg cap	30
Hydrochlorothiazide (HCTZ) 25mg tab	30
Hydrochlorothiazide (HCTZ) 50mg tab	30
Isosorbide Mononitrate 30mg ER tab	15
Isosorbide Mononitrate 60mg ER tab	15
Lisinopril 2.5mg tab	30
Lisinopril 5mg tab	30
Lisinopril 10mg tab	30
Lisinopril 20mg tab	30
Lisinopril-HCTZ 10mg-12.5mg tab	30
Lisinopril-HCTZ 20mg-12.5mg tab	30
Lisinopril-HCTZ 20mg-25mg tab	30
Methyldopa 250mg tab	30
Metoprolol Tartrate 25mg tab	60

Metoprolol Tartrate 50mg tab	60
Metoprolol Tartrate 100mg tab	60
Prazosin HCL 1mg cap	15
Propranolol 10mg tab	30
Propranolol 20mg tab	15
Propranolol 40mg tab	15
Quinapril 10mg tab	30
Quinapril 20mg tab	30
Quinapril 40mg tab	30
Sotalol HCL 80mg tab	30
Sotalol HCL 120mg tab	30
Spironolactone 25mg tab	30
Spironolactone 50mg tab	15
Terazosin 1mg cap	30
Terazosin 2mg cap	30
Terazosin 5mg cap	30
Terazosin 10mg cap	30
Torsemide 5mg tab	30
Torsemide 10mg tab	30
Torsemide 20mg tab	30
Triamterene-HCTZ 37.5mg-25mg tab	15
Triamterene-HCTZ 75mg-50mg tab	15
Verapamil 80mg tab	30
Verapamil 120mg tab	30
Verapamil ER 120mg tab	15
Verapamil ER 180mg tab	15
Verapamil ER 240mg tab	15
Warfarin 1mg tab	30
Warfarin 2mg tab	30
Warfarin 2.5mg tab	30
Warfarin 3mg tab	30
Warfarin 4mg tab	30
Warfarin 5mg tab	30
Warfarin 6mg tab	30
Warfarin 7.5mg tab	30
Warfarin 10mg tab	30

Mental Health	
Amitriptyline 10mg tab	30
Amitriptyline 25mg tab	15
Amitriptyline 50mg tab	5

Amitriptyline 75mg tab	5
Benztropine 0.5mg tab	30
Benztropine 1mg tab	30
Benztropine 2mg tab	30
Bupropion SR 100mg tab	10
Bupropion SR 150mg tab	10
Bupropion XL 150mg tab	10
Bupropion XL 300mg tab	5
Buspirone 5mg tab	60
Buspirone 10mg tab	60
Buspirone 10mg tab	30
Carbamazepine 100mg chew tab	15
Carbamazepine 200mg tab	10
Citalopram 20mg tab	30
Citalopram 40mg tab	30
Divalproex DR 250mg tab	60
Divalproex DR 500mg tab	30
Escitalopram 5mg tab	30
Escitalopram 10mg tab	30
Escitalopram 20mg tab	30
Fluoxetine 10mg tab	30
Fluoxetine 10mg cap	30
Fluoxetine 20mg cap	30
Fluoxetine 40mg cap	15
Fluvoxamine 25mg tab	15
Gabapentin 100mg cap	90
Gabapentin 300mg cap	60
Gabapentin 400mg cap	30
Guanfacine 1mg tab	60
Guanfacine 2mg tab	30
Haloperidol 0.5mg tab	15
Haloperidol 1mg tab	10
Haloperidol 2mg tab	10
Hydroxyzine HCl 10mg tab	30
Hydroxyzine HCl 25mg tab	30
Hydroxyzine Pam 50mg tab	30
Hydroxyzine Pam 25mg cap	60
Hydroxyzine Pam 50mg cap	60
Lamotrigine 25mg tab	60
Lamotrigine 100mg tab	60
Lamotrigine 150mg tab	60

Lamotrigine 200mg tab	30
Levetiracetam 250mg tab	30
Levetiracetam 500mg tab	30
Lithium Carbonate 300mg cap	90
Mirtazapine 15mg tab	10
Mirtazapine 30mg tab	10
Mirtazapine 45mg tab	10
Nortriptyline 10mg cap	30
Nortriptyline 25mg cap	30
Nortriptyline 50mg cap	30
Olanzapine 2.5mg tab	30
Olanzapine 5mg tab	30
Olanzapine 10mg tab	15
Olanzapine 15mg tab	10
Olanzapine 20mg tab	10
Oxcarbazepine 150mg tab	30
Oxcarbazepine 300mg tab	15
Paroxetine 10mg tab	30
Paroxetine 20mg tab	30
Paroxetine 30mg tab	30
Paroxetine 40mg tab	30
Pramipexole 0.125mg tab	30
Pramipexole 0.25mg tab	30
Pramipexole 0.5mg tab	30
Pramipexole 1mg tab	30
Pramipexole 1.5mg tab	30
Primidone 250mg tab	30
Primidone 50mg tab	15
Prochlorperazine 10mg tab	30
Quetiapine 25mg tab	30
Quetiapine 50mg tab	15
Quetiapine 100mg tab	15
Quetiapine 200mg tab	15
Quetiapine 300mg tab	10
Quetiapine 400mg tab	7
Risperidone 0.5mg tab	30
Risperidone 1mg tab	30
Risperidone 2mg tab	10
Risperidone 3mg tab	15
Ropinirole 0.25mg tab	30
Ropinirole 0.5mg tab	30

Ropinirole 1mg tab	30
Ropinirole 2mg tab	30
Ropinirole 3mg tab	30
Ropinirole 4mg tab	30
Sertraline 25mg tab	30
Sertraline 50mg tab	30
Sertraline 100mg tab	30
Topiramate 25mg tab	60
Topiramate 50mg tab	60
Topiramate 100mg tab	30
Topiramate 200mg tab	30
Trazodone 50mg tab	30
Trazodone 100mg tab	30
Trazodone 150mg tab	30
Trihexyphenidyl 2mg tab	60
Trihexyphenidyl 5mg tab	30
Venlafaxine 25mg tab	15
Venlafaxine 50mg tab	15
Venlafaxine 75mg tab	15
Venlafaxine XR 75mg cap	15
Venlafaxine XR 150mg cap	15
Zonisamide 25mg cap	30
Zonisamide 50mg cap	15
Zonisamide 100mg cap	15

Skin	
Hydrocortisone 1% cream (28.35-30g tube)	30gm
Hydrocortisone 2.5% cream (30gm tube)	30gm
Triamcinolone 0.025% cream (15gm tube)	15gm
Triamcinolone 0.1% cream (15gm tube)	15gm
Triamcinolone 0.1% ointment (15gm tube)	15gm

Thyroid	
Levothyroxine 25mcg tab	10
Levothyroxine 50mcg tab	10
Levothyroxine 75mcg tab	10
Levothyroxine 88mcg tab	10
Levothyroxine 100mcg tab	10
Levothyroxine 112mcg tab	7
Levothyroxine 125mcg tab	7
Levothyroxine 137mcg tab	7

Levothyroxine 150mcg tab	7
Levothyroxine 175mcg tab	7
Levothyroxine 200mcg tab	7

Urinary	
Oxybutynin 5mg tab	10
Phenazopyridine 100mg tab	3
Phenazopyridine 200mg tab	3

Vitamins & Nutritional Health	
Folic Acid 1mg tab	30
Mag 64 64mg tab	60
Magnesium Oxide 400mg tab	30
Prenatal Plus	30

Women's Health	
Estradiol 0.5mg tab	30
Estradiol 1mg tab	30
Estradiol 2mg tab	30
MedroxyprogesteroneAcetate 2.5mg tab	30
Medroxyprogesterone Acetate 5mg tab	30
Medroxyprogesterone Acetate 10mg tab	30

Appendix C

Managerial Permission Letter

CoxHealth

07/25/2018

Dayna Harbin, RN, MSN, BC
Administrative Director, Psychiatric Services
Cox Medical Center South
1423 North Jefferson Ave
Springfield, MO 65802

Cox Health Human Rights and Protection Council
Cox College
1423 N. Jefferson Avenue
Springfield, MO 65803

To whom it may concern:

I, Dayna Harbin, RN, MSN, BC, Administrative Director, Psychiatric Services at Cox Medical Center North give my permission for Amy Herbst to conduct her upcoming study on readmission rates to the inpatient psychiatric adult units after the implementation of discharge medication assistance program (DMAP). Staff have been informed of the study's existence and all participation will be fully voluntary and without undue influence from Cox Health.

Thank you,

Dayna Harbin, RN, MSN, BC
Administrative Director of Psychiatric Services
Cox Medical Center North
Phone: 417-269-3736/Mobile 417-830-3257
Dayna.harbin@coxhealth.com

Appendix D

Excel Data Collection Sheet

DMAP form in numerical order per month	Age	Gender	Unit Discharged From	Readmitted to inpatient psych within 30 days?			If readmitted to psychiatric unit within 30 days:		Total number of 30-day readmissions to the psychiatric unit (given by Cox Health)
				None	Number of days between discharge and readmission	Unit Readmitted to	Discharge Diagnosis	Readmission Diagnosis	

Appendix E

Permission to Access Data

Burgess,Jade [Jade.Burgess@coxhealth.com]

To: Amy Herbst

Friday, November 30, 2018 7:40 AM

Ms. Herbst,
Your proposed QI project entitled "Evaluation of a Discharge Medication Assistance Program (DMAP) to Reduce Psychiatric Readmissions has been identified as quality improvement. It is our understand you will be seeking IRB approval through your academic institution. Once you obtain this approval, a copy of the letter will need to be sent data analytics where a de-identified report will be constructed and given to your director.

Thank you,
Jade Burgess

Jade Burgess RN-BC, MSN
Nursing Educator- MORH/ Nursing Research Coordinator, Educational Services
Phone: (417) 269-9647 | Mobile: (417) 576-1469
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