THE ROLE OF LABORATORY SERVICES IN SCHIZOPHRENIC PRIMARY CARE DELIVERY: A QUALITATIVE STUDY

by

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Abstract

The lack of primary care coordination for people with schizophrenia across the continuum of care in a rural Midwest state compromises long-term treatment success. For the purpose of primary care coordination this qualitative study explored perceptions of health care professionals that care for people with schizophrenia regarding expansion of laboratory and/or pharmacy services in the home health care setting. Mental health providers, home health care nurses, pharmacy and laboratory personnel participated in a focus group to identify common themes regarding access to care, care coordination and the utilization of laboratory and/or pharmacy services. A semistructured, open-ended focus group was used to examine the actual experiences of health care practitioners and professionals working with people with schizophrenia in the rural home health care setting. The findings of the focus group demonstrated several common themes. The first theme identified was people with schizophrenia have stigmas about their illness leading to non-compliance and reduced access to care. A second theme identified was the lack of community resources to care for people with schizophrenia. A third theme was the limited knowledge of health care providers to the utilization of home health care in the treatment of people with schizophrenia. The fourth theme was the lack of care coordination, social work and knowledge of the local issues faced by people with schizophrenia. The fifth and final theme was the lack of coordination with laboratory and pharmacy health care specialties. The results of the study may lend interest to more research regarding the utility of expanded home health care services in the care of people with schizophrenia.

Dedication

I dedicate this dissertation to my family. All the time spent in study and writing took from you, and I cannot thank you enough for your patience and love shown through this incredible journey. Thank you for the encouragement and inspirational words that kept me going when I thought I could not do any more. I also want to dedicate this to the memory of my mother, Mary Kay Zimmer, you introduced me to health care at a young age through your good works as a nurse's aide. It was your kindness to others that inspired me to follow my heart to this career. Thank you all for the love and support you have shown.

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CHAPTER 1. INTRODUCTION

People with schizophrenia present a challenge to many communities. Treating people with schizophrenia has presented unique challenges to one home health care agency in a rural, Midwestern community. People with schizophrenia in this area lack community resources, mental health care providers and coordination of primary care throughout the continuum. This is not uncommon as schizophrenia is a disease that affects many people in the United States (National Institute of Mental Health, 2016). Along with many other mental illnesses, resources and treatments to care for these individuals are limited. Approximately 70% of those in need of mental health services are not receiving them (Kazdin & Rabbitt, 2013). Improvement in rural communities through home health care are needed to meet the needs of this growing patient population and decreasing primary care providers.

Treatment compliance in people with schizophrenia is problematic for health care providers in the study's geographic location. Inconsistent reliability in prescriptions filled, laboratory testing performed, and other essential primary services completed makes it difficult to manage the care of the person with schizophrenia. Schizophrenia is estimated to affect less than 1% of the population, the inherent complexity of schizophrenia makes it both costly and difficult to provide care (Lin & Lee, 2008). Pharmacy services help maintain quality outcomes for this patient population through

medication compliance (Gallimore, Sokhal, Zeidler Schreiter, & Margolis, 2016). As medication experts, pharmacists may be uniquely positioned to participate on integrated care teams (Gallimore et al., 2016).

Some anti-psychotic medication can also have serious health risk side effects, to people with schizophrenia. One medication, Clozapine, requires routine and consistent laboratory monitoring to detect dangerous decreases in white blood cell production (Voulgari et al., 2015). The results of certain tests are required to be reported to a national registry for prescriptions to be refilled (Bastiampillai, Gupta, Chan, & Allison, 2016; Clozapine REMS program, 2015). To make this service successful, some clinics and hospitals offer in-home service for laboratory testing blood draws and prescription delivery. However, the full range of primary care services is not available in the home care setting in this study's geographic area.

There is a problem with effective collaboration between health care providers and people with schizophrenia. Although, people with schizophrenia do see their health care providers frequently there is evidence to show they do not receive standard evidence based health care (Bartels et al., 2013). In this study's geographic area psychiatrists generally handle the mental health aspects of the patient's care, however; the lack of access and coordination with primary health care providers falls short. This is a problem, and to gain support across the continuum of care, this study is conducted with a home health care agency located in a rural area in a Midwestern state.

The sponsoring home health care organization has recently began accepting people with schizophrenia. Improvements in communication with providers improved

through nursing interventions and case management. Leadership of the sponsoring home health care organization realize there are gaps in the long-term continuum of care for people with schizophrenia. Proper information on laboratory testing and prescription monitoring is not well communicated across specialties and clinics in this study's area. The gap addressed by this research study will provide leadership with an understanding of how expanding home health care services to include laboratory and/or pharmacy services is perceived by health care professionals. It is the first study to document the utilization of laboratory and/or pharmacy services along the continuum of care for people with schizophrenia through a home health care organization.

Introduction to the Problem

The need to understand the perceptions of adding laboratory and/or pharmacy services to the continuum of care for people with schizophrenia came from increased referral to home health care from the local hospital. The acceptance of people with schizophrenia into the home health care agency identified that only partial needs were being met when nursing assessments were completed. Proper laboratory monitoring and medication compliance was in disarray. Care coordination between health care providers of different organizations was lacking, and a definite need for increased and coordinated services was noted by home health care nursing.

A meeting with the Regional Manager indicated that a new medication management program was being developed within the organization. She described the purpose of the program was to gather all medication information from the patient and

perform a thorough reconciliation process to streamline and simplify the medication lists of incoming home health care clients. The researcher than described the issues being observed with incoming people with schizophrenia and presented a proposal for a study adding laboratory and/or pharmacy services to in-home care visits.

The researcher has over 25 years of laboratory leadership experience. This knowledge prompted the idea of adding laboratory services to the developing medication management program offered by the sponsoring organization. People with schizophrenia have laboratory needs and take medications that have adverse metabolic syndrome ramifications. The disconnect noted by nursing coupled with this need made for a rich research environment.

Background of the Study

The sponsoring organization is a Medicare certified home health care agency that delivers a broad array of personal care, nursing, therapy, and other health care services to over 3,000 children, adults and seniors. The research focuses on the current collaborative approaches between the organization and community resources to determine improvements in the current continuum of care. The study will also explore the perceptions of health care professionals regarding the utility of laboratory and/or pharmacy services as applied to home health care. The research findings help live the mission of the organization in creating meaningful differences in the people's lives. Furthermore, this study enables the organization to identify new areas to expand service offerings in the home health care continuum that has not been previously provided.

Home health care allows people to receive needed health care services within their own homes. People can receive coordinated services in the areas of skilled nursing, therapy and other area other needed areas while under the direction of their personal physician. Currently, there are more than 5 million Medicare and Medicaid beneficiaries receiving home health care from nearly 12,600 Medicare and Medicaid-participating home health agencies nationwide (Center for Medicare and Medicaid Services, 2017). The people with schizophrenia being cared for by the organization are primarily being seen by nursing personnel under the direction of a primary care physician. Nursing personnel are assisted by home health care aides that focus on the daily needs of people with schizophrenia. Home health care aides, often have the most consistent access to people with schizophrenia in their homes. The home health care aids scope of service is limited, but they often have the closest relationship with the person with schizophrenia. Based on frequent visits, leveraging that idea with in-home laboratory visits and coordinated pharmacy medication reconciliation is the basis of the study.

Although not studied before, adding an in-home laboratory-pharmacy based option, the primary care and mental health needs of people with schizophrenia may be improved. This has the potential to greatly reduce cost to the patient, insurer, and health care organization that is caring for this patient population. This is extremely important as the federal government is pushing health care organizations to cut costs, improve quality, and implement technology (Fontaine, Ross, Zink, & Schilling, 2010). This study explores new information on the long-term continuum of care for people with schizophrenia.

The goal is for the sponsoring organization to understand the current practice along the continuum of care within the community. The research provides information to health care professionals in community hospitals and clinics about home health care services and explores the utility of laboratory and/or pharmacy service potentials. Only 41% of adults in the U.S. with a mental health condition received mental health services in the past year (Substance Abuse and Mental Health Services Administration, 2014). Among adults with a serious mental illness (mental disorders requiring routine management), 62.9% received mental health services in the past year (Substance Abuse and Mental Health Services Administration, 2014). This one-year trend shows a slight increase in those with mental health illnesses receiving care over a six-year period (Substance Abuse and Mental Health Services Administration, 2014). The ability to consistently deliver care to people with schizophrenia outside the hospital or clinic is of great importance.

Statement of the Problem

The rural area where the study is being done has limited resources for caring for people with schizophrenia. The coordination of care for people with schizophrenia when not in the direct care of a hospital or clinic is failing. The sponsoring organization is privately owned and not affiliated with local clinics and hospitals. It is uniquely positioned to develop home health care models to improve the care for people with schizophrenia across the continuum of care. Gaining buy-in from local hospitals and

clinics to adopt collaborative approaches is difficult given referral patterns of local organizations to home health care within their own organization.

The research does not show a relationship between home health care organization ancillary services and perceptions in community resources caring for people with schizophrenia. This research has not explored alternative avenues to better care for people with schizophrenia through a home health care setting. The disconnect of current primary care and mental health issues in the community has serious consequences for the hospitals and clinics. The sponsoring organization is aware of a known disconnect between the primary care and mental health providers in coordinating the care of both the physical and mental health of people with schizophrenia. The sponsoring organization is willing to be a conduit between organizations to better coordinate care throughout the continuum.

Eighty-seven percent of people with schizophrenia in the United States have Medicaid or Medicare insurance (Khaykin, Eaton, Ford, Anthony, & Daumit 2010). The local hospital and clinics do not offer in-home blood draws for people in the community. The sponsoring home health care organization does offer in-home blood draws through skilled nursing to some of the people with schizophrenia in the study's catchment area, but other key primary health care indicators such as; white blood cell counts and Clozapine levels, are not consistently performed. Laboratory testing compliance and reimbursement requirements set up by government insurance payers make it difficult for home health care agencies to offer these programs (Scott & Nguyen, 2009). However, the potential for long-term success in outcomes for people with schizophrenia who

receive comprehensive care through a home health care organization has untapped potential.

Purpose of the Study

The purpose of this qualitative study was to explore perceptions of a home health care environment and whether offering laboratory and/or pharmacy services would benefit the care provided to people with schizophrenia. Patient outcomes are influenced by the laboratory professional's ability to provide information for clinicians to monitor the effectiveness of treatments and therapies (Clinical Laboratory Science, 2013). Comparing these perceptions with current literature will provide an opportunity for the focus group participants and the organization to identify gaps in the current practices. Identifying these gaps allows for further dialogue among organizations within the continuum of care.

Theoretical Framework

Two theories were selected for the structure of this study. This study utilized behavioral change theory derived from Icek Ajzen's theory of planned behavior and Bryan Weiner's organizational ready to change theory. Theory of planned behavior explains that behavioral control and intentions are the premise for individual behavior (Azjen, 1991). The organizational readiness for change is critical for the successful implementation of changes in health care settings (Weiner, 2009). Shared beliefs and collective capabilities are crucial because implementation entails collective action among interdependent individuals and work units (Weiner, 2009). This study explored current

referral practices of local organizations to understand the decision-making process of mental health practitioners regarding home health care services. Understanding current referral process allows readiness for change to become a theoretical framework for local physicians and health care professionals to develop new processes. The focus group incorporated organizational culture and current practices within the local physician groups into the investigation. Participants learned how the control and intentions of health care providers and other professionals can be synergistically harnessed to realize the beliefs and capabilities of those they encounter along the continuum.

A semi-structured focus group with health care providers and professionals along with a thorough literature review to gather perceptions of the utilization of laboratory and/or pharmacy services through a home health care organization in the Midwest. The qualitative focus group allowed the researcher to stay involved in the topic and experience lived experiences of health care professionals along the continuum of care for people with schizophrenia. This study impacted the organization; community health care professionals caring for people with schizophrenia and recorded perspectives on current practices. This allowed for understanding of barriers to care, utilization of home health care in the continuum of care for people with schizophrenia, and current decision-making processes for referring people with schizophrenia to home health care. The dissemination of information, including laboratory and pharmacy coordination is of great benefit to mental health practitioners attempting to meet the primary care needs of people with schizophrenia.

The participants taking part in the focus group were health care providers representing mental health, nursing, pharmacy and laboratory. Professionals directly caring for people with schizophrenia were invited to participate in the focus group. Participants represented professionals inside and outside the organization, but were part of the same rural community. The participants were known to each other, but did not work together directly.

There are no current studies that directly address the utilization of laboratory and/or pharmacy services within a home health care setting that care for people with schizophrenia. Through the literature review and the focus group common themes were identified that applied to the current research question. Laboratory professionals have been shown to be instrumental in providing information to providers for monitoring and improving long-term outcomes for patients (Clinical Laboratory Science, 2013). This concept is worth exploring further to see if laboratory professionals are effective additions to home health care in the care for people with schizophrenia. Pharmacists have shown to have success in complex medication compliance for patients taking multiple medications (Gallimore, Sokhal, Zeidler Schreiter, & Margolis, 2016). People with schizophrenia are typically on many medications and the use of pharmacy coupled with frequent laboratory services is worth further investigation.

The limited primary care providers in the study's geographic area and current trends in primary care shortages across the country led to the conceptual idea for the study. By adding services to the long-term continuum of care for people with schizophrenia benefits all organizations involved in their care. These include decreased

costs, fewer hospitalizations, and societal benefits in the community. The potential for decreasing the demand on primary care in the geographic area will benefit future shortcomings addressed in the literature review.

Rationale

The lack of resources and inconsistent treatment practices of people with schizophrenia in rural communities required an understanding of the current continuum of care perspectives. To provide quality care an understanding from multiple encounter perspectives must be understood to begin to improve on the continuum process (Baker et al., 2005). The participants in the study provided first-hand experience of current practices and subsequent shortcomings. The experiences of the participants allowed the study to realize the perceptions of the research question and support a pragmatic approach for the study methodology.

The rationale of the study was to find a qualitative method that used a pragmatic, open dialogue design to identify the main obstacles to caring for the continuum of care of the person with schizophrenia. Participants of the study were representing the continuum of care for people with schizophrenia. Representatives from the local hospital, clinic and home health care agency were part of the study.

The study attempted to identify current perspectives to the home health care treatment of people with schizophrenia. Specifically, laboratory and pharmacy services in a home health care setting were studied to determine if expansion in these areas would be beneficial across the continuum. The study focused on identifying the main obstacles

to providing quality care to the person with schizophrenia in a rural area where mental health resources are limited.

Although not measured in this study, the population served would likely benefit by the organization identifying whether expanding laboratory and/or pharmacy services additions along the continuum of care. People with schizophrenia that entrust their care to this organization would receive thorough assessments and enhanced care coordination between health care specialties. The home health care organization reports outcomes to federal agencies and are currently working on streamlining care models to maximize reimbursements while increasing outcome measurements. The goal of the organization is to become the provider of choice within the study's geographic area.

Research Questions

RQ1: What are the perceptions of health care professionals that care for people with schizophrenia regarding expansion of laboratory and/or pharmacy services in the home health care setting for the purpose of primary care coordination?

SQ1: What are the perceptions of health care professionals regarding limitations to access of primary care for people with schizophrenia in a home health care organization in the rural Midwestern Unites States?

SQ2: What are the perceived barriers for improving practices in meeting the care needs of people with schizophrenia in rural Midwestern home care organizations?

SQ3: What are the perceptions of coordinating laboratory, pharmacy and other areas to improve the current care of people with schizophrenia?

Significance of the Study

Qualitative studies and topic literature that focus on whether the laboratory and/or pharmacy in a home health care setting can make a significant difference in the outcomes of people with schizophrenia are not yet available. This study is the first to research the importance of laboratory and/or pharmacy service expansion into the home health care setting. Improvement in the overall health of people with schizophrenia being treated in a home health care setting would lead to further study and exploration into other delivery methods available to all patients under home health care.

By using a focus group approach this study will explore the long-term continuum of care for people with schizophrenia in a rural setting. Included in the inquiry will be will be the understanding perception from health care professionals on the utilization of laboratory and/or pharmacy services in a home health care setting. This study could serve as a model for applying laboratory and/or pharmacy services to different patient touch points along the continuum of care. Industry statistics show schizophrenia and other mental health illness has high costs associated with them (Cloutier et al., 2016). These non-nursing interventions could lead to future cost reductions and increased revenues for organizations.

Assumptions and Limitations

There are theoretical, topical and methodological assumptions associated with the current study. It is assumed that behavior change theory (Azjen, 1991) and

organizational ready to change theory (Weiner, 2009) would be the appropriate theories to apply to the study. It is assumed that health care professionals caring for people with schizophrenia would be qualified to understand the perceptions of all participants. Focus group participants are generally interested and qualified in discussing the topic (Ivey, 2016). This would allow for the participants to compare learned perceived behaviors to those currently practiced

Doctors are creatures of habit, and the assumption that creating a change in the practice of providers would have to be initiated by health care professionals that are working closely with people with schizophrenia in their homes (Nilsen, Broback, Brostrom, & Ellstrom, 2012). The researcher assumed the study will not initiate a change in practice of local health care professionals' due to the researcher's position within the continuum of care. Rather, it is assumed that the research will educate those in the continuum on the perceptions of ancillary services available through home health care. The researcher assumed this information will be used by those in the continuum to further develop processes that may utilize ancillary services in the treatment of people with schizophrenia.

The study also has methodological assumptions. It is assumed the participants would be honest with their responses and the iterative process brings about the greatest information regarding current referral practices of people with schizophrenia. The participants can equally express their transparent views (Turton, Wright, White, & Killaspy, 2010). The methodological assumptions allowed for a rich dialogue to develop

through the research question and sub questions. This dialogue created common theme development and a deep exploration into health care professional perceptions.

This study is limited to eight health care professionals along the continuum of care within a large geographic area. Although, chosen by their interest in mental illness and caring for people with schizophrenia, not having a primary care practitioner is a possible limitation. The researcher avoided biasing the discussion due to the potential from primary care practitioners needs to protect their own interests. The minimal number of participants in the focus group is limiting to the study's breadth.

Research of this kind has limitations because each qualitative research study is unique unto itself. The greatest limitation of the study is the intrinsic lack of generalizability, because the study has a qualitative design and thus lacks randomization that would allow for extensive differential statistical analysis. Qualitative research studies are meant to study a specific issue or phenomenon in a certain population, hence generalizability of qualitative research findings is usually not an expected attribute (Leung, 2015).

Organization of the Remainder of the Study

The remaining aspects of the dissertation are contained in the next four chapters: Chapter 2 contains a comparative literature of the important aspects in association with the study. Chapter 3 contains the study's design based upon the research questions, as well as the methodology of the study. Chapter 4 contains the analysis of qualitative data

and distillation of the common themes displayed in the form of tables. Chapter 5 contains the overall findings of the study, conclusions and recommendations for further studies.

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CHAPTER 2. LITERATURE REVIEW

Introduction to Literature Review

The treatment of people with schizophrenia is difficult to manage. The local lack of primary care physicians, multiple physician involvement, and the mental state of people with schizophrenia reduce the successful long-term care outcomes. The care of people with schizophrenia requires multiple interactions between the individual, organizations and community resources. Home health care is one possible resource that can be utilized to better coordinate care between multiple providers of care. Home health care for people with schizophrenia is currently underutilized in the study's geographic area.

The use of home health care, specifically laboratory and/or pharmacy services, has not been well established within the continuum of care to help coordinate the physical and mental health of people with schizophrenia. A laboratory home visit from a laboratory professional employed by a reference laboratory is reimbursed by Medicare (Medicare Claims Processing Manual, 2012). In contrast, home health care agencies are not able to reimburse for the service on their own. However, laboratory testing collection procedures are part of the home health care skilled nursing visit scope of practice (Medicare Benefit Policy Manual, 2017).

Chapter 2 compares and contrasts the literature surrounding the key topics of the study. There are no studies that specifically address the use of laboratory and pharmacy

service utilization in a home health care setting for people with schizophrenia. The literature review does address other areas where laboratory services have been instrumental in caring for patients and how that compares to utilization in a home health care setting. The literature review also shows the utilization of pharmacy services in managing complex medication cases and its utility in a home health care setting. The literature review compares and contrasts methodological approaches used in similar studies, and how it applies to the study's topic. Also included in the review is the current state of primary care demands and corresponding trending information of future primary care shortages.

Search Strategy

The Capella University offered a robust offering of information to complete the literature review. Searches were performed in ProQuest Academic Search Premier, Google Scholar and other search engines within the Capella University Library. Keywords used in the literature review were *primary care and schizophrenia, psychiatric family practice training, metabolic disorders in schizophrenia, treatment of schizophrenia, health care shortages, home health care and schizophrenia, laboratory services* and *schizophrenia, pharmacy services and schizophrenia, medication reconciliation* and other similar searches. Spider research using references within the articles were also used to expand the on the search topics. The relevant articles were categorized into different sections and placed in individual folders within the RefWorks tool in the Capella University Library.

The topics included in the folders are: Provider practices, metabolic disorders in schizophrenia, theory, and participatory action research. It is within these topics that the theoretical framework, methodology, ancillary service utility and health care practice trends were identified for the study. The literature has been analyzed, synthesized and perspectives discussed. A complete and thorough review of all material is presented in this chapter.

Theoretical Framework

Two theories were selected for investigation in relationship to the topic of study. Theory of planned behavior explains that behavioral control and intentions are the premise for individual behavior (Azjen, 1991). The organization ready for change theory states organizational readiness for change is critical for the successful implementation of changes in health care settings (Weiner, 2009). Emphasis is placed on shared beliefs and collective capabilities because implementation entails collective action among interdependent individuals and work units (Weiner, 2009). These two theories align to form a basis for which the development of common themes that cross multiple disciplines within a continuum of care can be understood and initiate an understanding of perception.

Theory of Planned Behavior

The theory of planned behavior has been used in many areas of study to explain the connection between beliefs and behavior (Azjen 1991). Health care providers want to do what is right for the patients they serve. Their intentions are good, and most physicians like to be in control of the decision- making processes in delivering care of

their patients. To create a behavioral change in a medical practice, the research must consider the worthiness of the actions as well as the autonomy of the provider to establish the predicted behavior needed to create a change. The theory of planned behavior considers certain behavioral controls to predict a certain behavior. The theory has been shown to predict that primary care physicians will deliver preventative services when controls are in place (Millstein, 1996).

Improved adherence to medication compliance in people with schizophrenia has been shown when individually tailored approaches designed to improve treatment have been derived from behavioral change theory using close relationships and norms (Kopelowicz et.al., 2015; Roldán-Merino et al., 2013; Whealin, Kuhn, & Pietrzak 2014). Home health care offers frequent visits over an indefinite amount of time. By creating close relationships and daily norms with people with schizophrenia improved medication compliance can be achieved. Using constructs from the theory of planned behavior to simplify daily lifestyles of people with schizophrenia and consistent control of medication compliance to health care providers enhanced preventative services can be realized.

The application of this theory is applicable to the methodology of the study in understanding the perceptions of what is in or out-of-control with a health care provider delivering care for people with schizophrenia. This knowledge will allow for development of processes to increase information gathering that are currently out of control for the health care providers. This knowledge will allow for a greater

understanding for the potential utilization and expansion of laboratory and/or pharmacy services for improving preventive care.

The theory of planned behavior not only provides prediction of behavior but also a model for behavior modification. Understanding the attitudes, norms and perceived controls can create new communication strategies to alter behavior (Casper 2007). Applying this model to current communication strategies between the home health care organization and the health care providers could improve the coordination of information that is currently lacking across the continuum. This theory has shown to be effective in changing behaviors of health care professionals in both primary care and mental health (Casper 2007).

Organizational Readiness for Change Theory

The organizational readiness for change theory describes the relationships between shared beliefs and collective capabilities being critical for the successful change in health care settings. The collective actions between interdependent individuals and work units are crucial for change strategies to be implemented. (Weiner, 2009). Health care practitioners believe that organizational readiness for change is an essential precursor to successful change implementation (Weiner, Amick, & Lee, 2008). The sponsoring organization has an understanding that creating better outcomes for the people with schizophrenia under their care will depend on changing perceptions of all care providers along the continuum of care.

Home health care agencies rely on information and permissions from health care providers that have referred people with schizophrenia to them. To make a difference in

the outcomes everyone along the continuum of care must have a good idea for what each respective area is accountable. Identifying the strengths, practice perceptions and barriers of organizations within the continuum of care for people with schizophrenia allows locally tailored implementation strategies to be developed with evidence based practices and better long-term outcomes (Hamilton, Cohen, & Young, 2010; Wise, Alexander, Green, Cohen, & Koster, 2011). The home health care organization realizes that once the person with schizophrenia has left the referring location's direct care the responsibility, reporting and coordination of care falls directly on the home health care agency organization's staff. The difficulty in coordinating across organizations, departments and health care providers becomes increasingly difficult because the home health care agency is evaluating the total health of the person. It is not uncommon for the referral to home health care to come from one specialty while other specialties caring for the person with schizophrenia not being notified of services being provided. To ensure coordination and collaboration during a home care episode the home health care agency staff often communicates with all health care providers.

Organization ready to change theory supports this study and the sponsoring organization's need to understand the perceptions of health care professionals along the continuum of care regarding expanding ancillary services in the quality delivery of care to people with schizophrenia. It is the perception of quality that drives the utilization of services in health care (Hanefeld, Powell-Jackson, & Balabanova, 2017). By understanding the perceptions of quality at the different organizations a dialogue about

ancillary services utilization may improve quality and change the processes for which organizations use to treat people with schizophrenia.

Relationship Between Theory and Study

In summary, understanding behavioral controls of health care providers and the perceptions of interdepartmental units and individuals will align shared beliefs and capabilities to effectively better care for people with schizophrenia. The literature and theories support the need for further exploration into expanding ancillary services for increased quality of care to people with schizophrenia. By understanding the application of laboratory and pharmacy services in the home health care setting has the potential for offering new information to health care providers and influencing their decision-making a controlled behavior (Kosack, Page, & Klatser, 2017). The combination of behavioral change and organizational readiness to change theories allowed the researcher to gather perspectives from both the individual and organizations along the continuum of care. The ability to learn and apply knowledge regarding the treatment of people with schizophrenia along the whole continuum of care is the desire of the sponsoring organization's leadership. This knowledge will allow the sponsoring organization to develop new home health care models for collaborating with individuals and organizations caring for people with schizophrenia.

Review of Literature

Limitation of Access to Care

Until recently, primary care physicians were still the main group of specialists graduating from medical schools and job availability was high. In the past several years many contributing factors have evolved to change this fact. Among these factors are a shift from primary to specialty care ratios, an aging work force (including physicians) retiring, and growing health care utilization rates (Association of American Medical Colleges, 2015; Bodenheimer & Smith, 2013). A real shortage of primary care providers is more evident than ever before. With a healthier aging population, more resources are needed long-term to care for them. An increase in chronic care will pull resources away from other primary care areas (Bodenheimer & Smith 2013). One area is the primary care that is coupled with chronic mental health problems (Calloway, Young, Ward-Smith & Paulsen, 2017). A shift away from graduating primary care providers and the increase in physicians selecting specialty care will also contribute to this resource shortfall (Williams & Torrens, 2010). With implementation of the PPACA 2010, long-term strategies must be created to help meet these growing needs. The recent increase in mid-level practitioners has helped in many areas; however, mental health still falls short of the appropriate clinical resources (Calloway, Young, Ward-Smith & Paulsen, 2017; Kazdim & Rabbitt, 2013). Included in the long-term plans should be resources allocated for the continued primary care of people with schizophrenia.

As the population continues to age, the demand for care has grown significantly. Huge number of baby boomers, insurance expansions and growing health care epidemics are contributing to this demand (Bodenheimer & Smith. 2013). Only 9 percent of US medical students are choosing family and internal medicine as his/her medical specialty

(Bodenheimer & Smith. 2013). In 2016 the primary care physicians leaving are greater than those entering (Bodenheimer & Smith. 2013). Total physician demand is projected to increase to 17%, with population aging/growth accounting for much of this demand (Association of American Medical Colleges,2015). Furthermore, the estimates are that in the next ten years there will be a shortfall between 12,500 and 31,000 primary care physicians (Association of American Medical Colleges,2015).

A ten-year trend in data shows that the shortage of family practice health care providers is still an issue although some increases in pay have been shown (Association of American Medical Colleges 2015). A principal reason: too little money for too much work. Median income for primary-care doctors was $162,000 in 2004, the lowest of any physician type. Specialists earned a median of $297,000, with cardiologists and radiologists exceeding $400,000 (Seward, 2007). Family physicians are earning more than last year, and their salaries are growing faster than other specialists (American Academy of Family Physicians 2015). Still, the gap between primary care and specialty care is still very wide. Family Practice is not as attractive to medical students' due to lower pay, longer hours and physician indebtedness.

As the country attempts to take a preventative stance and reduce the costs of health care, this shift in supply and demand is becoming a glaring issue. The colleges and universities offer little in signs of improving this (Williams & Torrens 2008). A lower number of graduates into primary care will create cause for some different health care strategies to take care of future needs. This in turn will further distance the access to primary care from the schizophrenic patient. To bridge this gap, a more convenient and

collaborative approach using all available resources must be developed. A strategy that centers on increasing access to care is needed to accomplish this given the current trends. It is this access to care that the schizophrenic patient needs most; yet, falls well behind in receiving compared to the rest of the patient population (Kazdim & Rabbitt, 2013).

Over 2.2 million people in the United States have schizophrenia and the average life expectancy is 15-25 years less than a healthy individual (National Institute of Mental Health, 2016; Olfson, Gerhard, Huang, Crystal, & Stroup, 2015; Pridan, et.al., 2015). The health of people with schizophrenia is difficult to manage holistically for a myriad of reasons (Hamm, et.al., 2017). Compliance to prescription medications and the proper laboratory test monitoring is often difficult due to the location and logistics of pharmacies and laboratories. Moving people with schizophrenia to multiple locations makes it difficult for mental health providers to give sustained mental health care to this population. Many physicians faced uncertainty and challenges when ordering and interpreting laboratory tests and will not take accountability for the laboratory testing for which this patient population should be monitored (Hickner et al., 2014). This uncertainty could possibly affect 23 million patients per year (Hickner et al., 2014). Complicated hand offs with information gaps between health care providers make the holistic approach to health care even more complicated.

There is a slow movement in incorporating primary care into psychiatric practice. Comfort levels, competence, and other resources have been identified (Reddy & Rado, 2017). The growing shortages of primary care physicians and the need for mental health providers to start taking a primary care stance with their patients is evident. Limited

research exists on experiences and views of health care providers regarding people with schizophrenia. Other research suggests that primary care providers are comfortable with assessment and diagnosing but not treating people with schizophrenia. (Pidano, Kimmelblatt, & Neace 2011). Similar studies show that primary care providers do not feel properly trained or possess adequate knowledge to treat people with schizophrenia (Cawthorpe, 2005; Stein at al., 2008). Some primary care providers refer people with schizophrenia to mental health providers and some do not feel responsible for treating people with schizophrenia due to lack of reimbursement and time restraints (Pidano, Kimmelblatt, & Neace 2011).

The demand for primary care in the health care structure in the country today is growing, and the schizophrenic patient may be neglected by this increase in demand (Substance Abuse and Mental Health Services Administration, 2014). The overwhelming costs, not only to health care but to society, begs for action to slow the rise of health care costs, loss of productivity and unemployment rates associated with schizophrenia. The economic burden of schizophrenia was estimated at $155.7 billion for 2013 and included excess direct health care costs of $37.7 billion, direct non–health care costs of $9.3 billion, and indirect costs of $117.3 billion compared to individuals without schizophrenia (Cloutier et.al., 2016; National Alliance on Mental Illness, 2013). The largest components were excess costs associated with unemployment, productivity loss due to care giving, and direct health care costs (Cloutier et.al., 2016)..

The lack of primary care and rising costs is further reason for mental health providers to manage these disorders. There is an increased need to monitor metabolic

disorders in patients taking antipsychotic drugs (Hasnain, 2016). These patients, which people with schizophrenia are included, are at increased risk of diabetes, coronary artery disease and other metabolic disorders (Reddy & Rado, 2017). These typically are not diseases that mental health providers are comfortable monitoring, but due to the ramifications of the anti-psychotic drugs prescribed by them, monitoring is required (Reddy & Rado, 2017; Clozapine REMS program, 2015).

The Midwestern state's Hospital Association Board of Directors showed the physician workforce is waning (Association of American Medical Colleges, 2012). Nearly half (45%) of the state's physicians are over the age of 50 and the 65 and older population is projected to increase by 58% by 2020 (Association of American Medical Colleges, 2012). Only 5% of all physicians practice in rural areas, while 13% of the state's population live there (Association of American Medical Colleges, 2012). Rural areas in the state also suffer from too few specialists as physician distribution is becoming a bigger problem in the southern and northern rural areas (Association of American Medical Colleges, 2012).

Lower pay incentives and less attractive lifestyle and practice scenarios is causing more medical students to choose different specialties. The care demand has been on the rise with the full implementation of the Affordable Care Act (Coombs, 2015). A lower number of graduates into primary care will cause different health care strategies to emerge for the future needs of the aging and mentally ill. A shift in practice patterns for specialists and the addition of mid-level practitioners are needed to cushion some of the demand. A sound holistic strategy for mental health providers treating people with

schizophrenia is needed given the current shortages. The addition of laboratory and/or pharmacy services to a home health care organization may be a bridge to better long-term treatment strategies.

Laboratory

The research topic question is asking what the perceptions of health care professionals are regarding the utilization of laboratory and/or pharmacy services in a home health care organization. Rural areas have attempted to get non-direct patient care personnel involved in the holistic approach to care (Goodwin, MacNaughton-Doucet, & Allan, 2016). Ontario's Regulated Health Professions Act mandates Ontario's colleges to take leadership in fostering inter-professional mental health collaborative practice (IMHCP) and to increase the scope of practice laboratory technologists (Goodwin et al., 2016). This idea has not been implemented in the United States but makes the purpose of this study's importance to the ongoing strategic developments in caring for people with mental health illnesses in rural areas.

Advances in laboratory test offerings are available to help better select medications based on the genetic make-up of people with schizophrenia (Eum, Lee, & Bishop, 2016). Genetic tests are among some of the services not part of standard practice in psychiatry (Eum et al., 2016). These tests can accurately give a profile on each person's metabolism of certain medications and provides information on which medications will work best given his or her individual genetic make-up (Eum et al., 2016). Early complex diagnostic testing is included in section 3113 of the Patient Protection and Affordable Care Act (PPACA) 2010. By adding to the scope of in-home

visits by nursing or expanding laboratory testing, people with schizophrenia could have the services needed for better Clozapine monitoring. Combined with available pharmacy consulting programs medication compliance for this patient population would increase and allow people with schizophrenia to remain independent (Brown, Barrett, Caffery, Hourihan, & Ireys, 2013). This preventative approach allows for timely dosing of prescription medicines, increase metabolic disease indicator compliance, and reduce costs due to mental illness relapses and re-hospitalizations due to non-compliance or sub-therapeutic medication levels.

The relationship between lack of primary care and the metabolic issues associated with the prescribed anti-psychotic medications people with schizophrenia take is an important aspect of this study. The mandatory laboratory testing needed to be prescribed the medications allows another potential touch point along the continuum of care. It is this touch point with laboratory personnel that this study will attempt to understand and leverage for better outcomes. Patient outcomes are influenced by the laboratory professional's ability to provide information for clinicians to monitor the effectiveness of treatments and therapies (Clinical Laboratory Science, 2013; (Godefroi, Klementowicz, & Pepler, 2005). Laboratory services assure the health and wellness of patients with chronic illness are managed appropriately and that complications are prevented (Clinical Laboratory Science, 2013). The study will seek to ascertain whether there is more that this profession can do to affect the outcomes of care.

Studies specifically addressing the research question's scope and utilization of laboratory professionals in a home health care setting for improving treatment outcomes

for people with schizophrenia are not available. However, the use of laboratory personnel in limited resource areas has shown to be an effective tool for improving health care. In recent history, the development of Point of Care Testing (POCT) and the use of laboratory professionals to affect health care outcomes has proven innovative. Point of care laboratory testing can accelerate clinical management and improve patient-centered outcomes in areas of limited resources or properly trained staff (Drain et al., 2014). This finding is important to show the relationship between laboratory innovations and the possibility of affecting the care of people with schizophrenia.

Pharmacy

The pharmacy has a history of being involved in the care of people with schizophrenia. One of the main prescriptions filled by pharmacy for the treatment of schizophrenia is Clozapine. When taking this medication, laboratory testing is required, and the results must be reported to a national registry (Bastiampillai et al., 2016; Clozapine REMS program, 2015). The sponsoring organization's pharmacy program known as a comprehensive medical review (CRM) is in the planning stages. The goal for the program is for all home health care admitted patients to have a full review of their medication list with recommendations and adverse reactions available to the responsible health care provider. Leveraging this service with the proposed laboratory services would be beneficial to the person with schizophrenia under the care of the sponsoring home health care organization.

In a comprehensive medical review, a pharmacist reviews all medications and ensures the person is taking them as prescribed, then look for interactions or side effects

of medications that may cause problems, such as falls. Pharmacists also check to see how well conditions like diabetes, high blood pressure, high cholesterol and others are controlled by asking about symptoms and checking medical records. Pharmacists also ensure that every medication being taken are necessary, as sometimes medications are left active when they are no longer needed. At the end of a CMR, the clinical pharmacist makes recommendations to care professionals, and provides the person with schizophrenia with some information that can be used to better manage medications.

Utilization of pharmacy services in home care is of great importance. A quality measure monitored by the Agency for Health care Research and Quality (AHRQ) and obtained from the Outcome and Assessment Information Set (OASIS) data set is the number of patients who improve at taking their medicines correctly (AHRQ 2005). The Estimates show 63% of medication errors happen during transition points including the transition to home (Joint Commission, 2006). Thirty-nine percent of home health care patients required nine or more medications (Cannon, Choi, & Zuniga, 2006). These statistics are a stark reality that expansion of pharmacy services in the home health care setting are extremely critical.

Home care patients are responsible for managing their own medication regimen. Home health care nursing personnel can set medications for them, but the onus of responsibility of taking them falls on the individual. People with schizophrenia are at increased risk of failed medication compliance due to fragile mental faculties. Some health care providers are aware of the risks associated with complex medication regiments, but believe the person with schizophrenia is being closely monitored (Dierich,

Mueller, & Westra, 2011). The need for pharmacy services and CRM in the home health care setting coupled with the addition of laboratory testing to monitor metabolic issues, therapeutic drug levels and blood cell counts has potential value in improving the care for people with schizophrenia.

Review of Methodological Literature

A focus group was conducted to understand the perceptions of those in the continuum of care for people with schizophrenia was used for this study. A focus group allowed the researcher to further investigate the potential utility of laboratory and/or pharmacy services in a home health care organization. Participatory Action Research (PAR) utilizing a focus group is the methodology that is primarily used to conduct the qualitative research.

PAR is an integrative concept incorporating values such as participation, collaboration, communication, community of practice, networking, and synergy with the purpose of producing practical knowledge, communication and change. (Schneider 2012; Zuber-Skeritt 2015). Through dialogue, support and personal reflection, members of PAR generate innovative practices (Nelson, Griffin, & Lord, 1998). It is this type of communication the researcher will leverage to collect qualitative information and allow the group of professionals, influential in treating schizophrenia, to create better processes.

People factor is the most important part of knowledge sharing that can properly affect organizational change (Park & Kim, 2015). Although for this study, no consumers of schizophrenic care are involved, professionals along the continuum of care participate

in the study. The dynamic between these two separate contexts is an important consideration for this study. Therefore, this study will focus on this group and their abilities to positively affect change on behalf of the consumer. Good progress in mental health systems has been achieved in other areas of health care delivery through focus group studies. Recent research done by the University of California has shown reduction in barriers to mental health services and better educational opportunities for school based health care programs (Psychology and Psychiatry Journal, 2017).

Focus groups are well suited to gather this information for a study of this type (Jacobsen, 2012). To make research meaningful, the relationships must be powerful (Ochaka, Janzen, & Nelson, 2002). The participants of the focus group all work in the same geographic area and frequently connect along the same continuum of care. Furthermore, the research methodology for the study fits the given research topic and geographic location. The population of the study area is rural, and resources are in short supply. The involvement of health care professionals' familiar with the current resources, barriers in access and continuum of care services are known to the local geographic area.

Synthesis of the Research Findings

The theoretical framework of study has shown to be applicable in other health care areas. Creating change and behavior in organizations and individuals takes collaboration, shared beliefs, and outstanding communication. These theories applied to this study will allow for these constructs to be utilized to create common themes of

perceptions that can be used to support and build controls within organizations to positively affect health care provider behavior.

The literature review supported the need laboratory and pharmacy services to be incorporated into a home health care setting for the care of people with schizophrenia. The demand for primary care in the country today is growing, and the schizophrenic patient may be neglected by this increase in demand (Substance Abuse and Mental Health Services Administration, 2014). The overwhelming costs, not only to health care, but to society demands action to be taken to slow the chronic poor outcomes and associated societal effects seen with schizophrenia (National Alliance on Mental Illness, 2013).

The future of the number of physicians in the state where the study is conducted was shown to be on the decline (Association of American Medical Colleges 2012). The aging physician as well as population will further strain the supply and demand for primary health care in the state with further exacerbation in rural areas. The research shows that other strategies are needed to care for people with schizophrenia. The literature review explored an ancillary approach to improving the outcomes of people with schizophrenia. Laboratory personnel have been shown to be instrumental in other areas of health care in bettering outcomes (Clinical Laboratory Science, 2013).

The research also shows that laboratory personnel have proven useful for innovative ways to improve health care of patients in areas with few resources (Wilson et al., 2014). The interaction between the laboratory personnel and people with schizophrenia is necessary and the research question has support through the literature

review for further exploration. Laboratory personnel have a limited scope of practice but have proved to be of benefit in other areas of health care. The exploration of their further utility is warranted.

Pharmacy personnel have a history of intervention with people with schizophrenia through comprehensive medical reviews in hospitals and clinics. Although new to the home care setting, research shows the need for pharmacy services within a home care organization has important benefits to long-term success with medication compliance. Expansion of pharmacy services into the home health care setting would continue established continuity of medication compliance throughout the continuum of care.

The methodology used for the study has proven literature support. Action research within an organization takes an ethnographic and participative approach. Focus groups of the study's size are proven to be successful for generating common themes and gaining understanding of perceptions that cross multiple organizations. The participants in the focus group are known to each other which adds to the relationships and strength of the study. The participants common relationship to the research question will allow for great sharing of knowledge. This free flow of knowledge is the basis for creating change within the organizations.

Summary

There is ample literature to support the need of adding laboratory and/or pharmacy services to the home care setting. The research shows a great need for resources when caring for people with schizophrenia. Primary care providers are not completely comfortable caring for people with schizophrenia and access to primary care

is becoming a glaring problem. There is also a disconnect between health care specialties and transition points along the continuum of care. Home health care organizations have the potential to fill those gaps.

There are no studies specifically addressing the research question. The expansion of the role of laboratory personnel in the care of people with schizophrenia would be of interest to current and future research studies. Rural areas are profoundly affected by lack of resources, and the literature shows the need for alternative approaches to caring for people with schizophrenia.

The methods researched have been used in similar studies and are common among researchers in an academic setting. The PAR approach and focus group methods were used to guide the action research cycle. This allowed for the measures and action to be developed from within the study itself. This will add to the rigor and validity of the study and will add to the overall knowledge base of the topic being researched.

The next chapter, Chapter 3, will describe the methodology, setting, sample size, data collection, data analysis, measures, reliability and ethical considerations of the study.

CHAPTER 3. METHODOLOGY

Research Design

This study is a qualitative participatory action research study utilizing a focus group methodology for data collection. Participatory action research allows the researcher to document perceptions along the continuum of care for people with schizophrenia by incorporating values such as participation, collaboration, communication, community of practice, networking, and synergy (Zuber-Skeritt, 2015). The researcher has 25 years of laboratory professional experience and currently works in leadership within a home health care organization. The researcher conducted a focus group with health care professionals with current experience with caring for people with schizophrenia along the continuum of care. Focus groups allow for an iterative process and development of common themes from health care professionals caring for people with schizophrenia (Henshall et. al., 2017). The goal was to find common themes in (a) the most common barriers for coordinated care for people with schizophrenia, (b) understanding perceptions on the utilization of laboratory and pharmacy services to improve the care for people with schizophrenia, and (c) if a home health care agency can synergistically improve on the overall care of people with schizophrenia through the expansion or addition of ancillary services. This study is designed for this researcher to investigate a problem within industry and return to the sponsoring organization with

information and recommendations for adding services that will affect outcomes for people with schizophrenia.

Sample

Qualitative research is more effective with a smaller group as compared to quantitative research (Schneider 2002).. The ability to have open responses and further discussion of topics creates a rich environment for gaining insight into the current state of the topic (Schneider 2002). No specific number is needed for a proper sample to be valid (Schneider 2002). The sample size should be dependent on what knowledge is needed, the purpose of the study, usefulness and credibility of information, and available resources (Schneider 2002). Participants in the study are knowledgeable and in direct care of people with schizophrenia along the long-term continuum.

This study has a sample size of eight participants that represents laboratory, pharmacy, nursing and practitioners of mental and physical health. These professionals are experienced in-home health, clinic and hospital care and delivering ancillary services in all three settings of the continuum of care. The inclusion criterion was (a) care professionals that are caring for people with schizophrenia and co-morbid diagnoses, (b) nurses that care for people with schizophrenia and co-morbid diagnoses and (c) pharmacy and laboratory professionals that deliver support to people with schizophrenia and co-morbid diagnoses. The exclusion criterion was health care professionals who do not care for people with schizophrenia or with no interest in the study.

Using snowball sampling; the researcher recruited qualified participants.

Snowball sampling is networking where participants are connected through direct and/or indirect linkages, and can be quickly recruited (Patton, 2002; Hawk & Hill, 2016) In this study, the network was comprised of caring health care practitioners, nurses, and ancillary professionals that had experience with people with schizophrenia and the current resources in the area to care for them. This is important for the purposes of understanding the current operations and barriers to care that are encountered within the geographic area.

Setting

Participants were part of a home health agency that specializes in mental health or in practice at local clinics and the hospital that has a large catchment area in rural Midwestern state. The sponsoring organization is a branch office of privately owned home health care agency in a Midwestern state. The branch office has 40 employees and offers services in home health care nursing, physical and occupational therapy. The organization does not have social services or ancillary services. The community participants represent two clinics and the only hospital in the study's geographic area.

The participants were recruited through networking by using electronic mail from a secured server with information regarding the study. The participants were sent the informed consent three weeks prior to meeting for the focus group. Instructions for reviewing the information and explanation about response privacy was included. The researcher contact information was given to the participants for any questions to be addressed prior to the focus group. The participants were asked to bring the signed

informed consent to the focus group for inclusion in the study. The researcher is the branch manager of the home health care agency, and three of the nurses were recruited from within the agency. Those nurses were helpful in the snowballing recruitment effort with colleagues.

As part of the electronic mail, the research sent a letter of invitation along with the information and informed consent to the participants. The consent clearly stated what the researcher was involved in, and allowed the subjects to have a clear understanding of the content of the study and participant expectations (Anderson & Herr, 2005). The consent forms were written at a language below the eighth-grade level to guarantee participants understand the form details (Villafranca, Kereliuk, Hamlin, Johnson, & Jacobsohn, 2017). This allowed the participants to decide for themselves whether they wanted to be a part of the research study. An overview of the study, research questions and participant expectations were sent ahead of time along with contact information of the researcher in case there were questions or concerns prior to the focus group meeting. No questions or concerns were received prior to the focus group meeting.

Instrumentation/Measures

The researcher used open-ended questions to gather information on common themes during a focus group with eight participants. The main research question and purpose for the study was explained to participants. The main research question is: RQ1: What are the perceptions of health care professionals that care for people with schizophrenia regarding expansion of laboratory and/or pharmacy services in the home

health care setting for the purpose of primary care coordination? Three sub research questions were asked for the purpose of data collection and analysis. The three sub research questions that were asked are:

SQ1: What are the perceptions of health care professionals regarding limitations to access of primary care for people with schizophrenia in a home health care organization in the rural Midwestern Unites States?

SQ2: What are the perceived barriers for improving practices in meeting the care needs of people with schizophrenia in rural Midwestern home care organizations?

SQ3: What are the perceptions of coordinating laboratory, pharmacy and other areas to improve the current care of people with schizophrenia?

The actual measurements were developed as the common themes were identified.. Current literature is limited, and the analytical presentation of findings were formulated organically using the ATLAS.ti qualitative data analysis software. The PAR approach was used to guide the action research cycle, and this allowed the measures and action to be developed from within the study itself. This added to the rigor and validity of the study and provided a new knowledge base of the research topic.

Data Collection

As the date and time were set for the focus group, an electronic calendar invitation was sent to the participants. When verification was received by the researcher that the participant was attending, an electronic thank you email was sent as confirmation as to request receipt. Attached to the response was research on the topic outlining

physician shortages, current statistics on the topic of schizophrenia, and another brief description of the focus group setting.

Upon arriving at the focus group, all participants were asked if they had questions or needed explanation regarding the information and informed consent they had received. Once this process was complete the participants signed and handed in their informed consent forms and were seated around a table. The process for confidentiality of their identity was explained and the focus group began. It is imperative that confidentiality and privacy be maintained throughout the research process. If a subject/volunteer did not wish to have certain aspects of the research disclosed, it is appropriate for the researcher to comply with the request. This can create some bias in the research but was not present in this study; therefore, violating the confidentiality and privacy of the subjects was negated.

The researcher used two audio recording devices that were tested for quality from various distances prior to the meeting and field notes were taken to gather data that came from the research questions. The questions were asked individually, with the participants able to freely answer the questions in their own words. The researcher then asked a series of follow up questions to repeat the iterative process and gain as much information on the topic as possible. Field notes from the focus group included brackets and symbols by the researcher to mark key idea concepts and non-verbal observations that were taking place during the questions and answers. All recorded information was then transcribed verbatim, and participants were kept confidential.

Data Analysis

Data was reviewed for accuracy and compared to field notes. The transcript was interpreted, and themes were pulled from individual sentences. The themes were categorized and coded using the qualitative analysis software; ATLAS.ti. Coding was done in three steps: An open coding technique was used to pull the individual themes or meanings from the participant responses. Axial coding was performed to review the data and plan the sub-coding. Finally, selective coding was performed to further distill the coded themes into sub-codes used for common theme creation. These codes were separated by individual question and generally categorized to separate the common themes. Data analysis is a good way to identify patterns for explaining the goal of the studied phenomena (Neuman, 2003). Each category was ranked by total number of common themes falling within that category and tables were created to illustrate expression of the findings.

Reliability

The information, reason and instructions of the study were provided to participants prior to the study to ensure the experiences of the participants were relevant to the study. Inclusion criteria was established prior to the focus group to further ensure that the participants were reliable for the study. The interview questions were verified by through the IRB process to be reliable base line questions that allowed for a further iterative process during the focus group.

Ethical Considerations

Action research studies must have an unbiased, open-minded researcher that is able to take all information as authentic and true and not make pre-judgments prior to the research being done (Anderson & Herr, 2005). It is of the utmost importance for the researcher to be keenly aware of any circumstances that could be perceived as coercive or unethical in any way (Anderson & Herr, 2005). The three main areas of ethical concern in biomedical research are beneficence, autonomy and distributive justice (Jacobsen 2012). These three areas were handled in an ethical manner always and the research is considered valid.

Beneficence means that the study must do well for the general population; not necessarily the group being studied but rather society (Anderson & Herr, 2005). This study gave insight into the care of people with schizophrenia in a rural area and if applied in more areas will also help society with the potential for decreased health care costs, less psychotic episodes, and better access to primary care for other people that only see a health care specialist.

Autonomy means that all people in the study must be volunteers, and therefore, consent must be obtained prior to any research being done (Anderson & Herr, 2005). This consent was granted by the organization and participants prior to taking part in the focus group. The consent form clearly stated what the participant can expect if he or she takes part in the research study (Anderson & Herr, 2005). The consent forms were maintained in a confidential manner and signed prior to the focus group taking place.

Distributive justice means that the research and results from the research must be shared fairly with all people (Anderson & Herr, 2005). The dissemination of study details we shared with the subjects along the way through electronic mail. Analysis findings were shared with the staff at the home health care agency. The sponsoring organization will decide whether to monitor the utilization of laboratory and/or pharmacy services in increasing primary care access to people with schizophrenia. Results will be shared with other home care agencies within the organization upon approval from senior leadership at the corporate office. The researcher will share the dissertation with educators in similar programs at local universities. From this, potentially more research can be done in other specialty areas. With these three principles at the forefront of this study's researcher, ethical outcomes have been accomplished.

CHAPTER 4. RESULTS

Introduction

The purpose of the study was to gather perceptions around adding laboratory and/or pharmacy services to a home health care agency for the benefit of impacting outcomes for people with schizophrenia. The unique qualifications and experiences of the participants contributing to the focus group allowed for examination of the process and whether the utility of laboratory and/or pharmacy professionals would help in the continuity of care between physical and mental health medical practices. The care model deliveries in the settings of hospital, clinic and home health care were explored to gain insight as to which, if any, the laboratory and pharmacy professionals could affect a positive change. The study showed that laboratory and/or pharmacy could not affect change enough to create a separate process from the current practice and deliver better care. The study did however, identify the main barriers and how opportunities to overcome them through a home health care model of delivery. Within this model, laboratory and pharmacy could be incorporated to improve the care of the patient population and allowed for a closer look at this model.

The content of the focus group was qualitatively analyzed. An eight-participant focus group was conducted in a conference room at a home health care organization in a rural community in a Midwestern state, and the entirety of the focus group was tape recorded. Three research questions were used to gather information and subsequent data

from participants that had firsthand experience in caring for people with schizophrenia and the current barriers and resources available to care for this population. This chapter provides (a) information about the sample data population, (b) an explanation of the research methodology, and (c) a presentation of findings with tables and verbatim passages that support the themes created based on the focus group. Data was gathered from the focus group that addressed the main research question and gathered perceptions regarding the laboratory and/or pharmacy utilization for improving outcomes of the physical health for people with schizophrenia versus the current practice. To do this, the following three questions were used to gather the data.

RQ1: What are the perceptions of health care professionals that care for people with schizophrenia regarding expansion of laboratory and/or pharmacy services in the home health care setting for the purpose of primary care coordination?

SQ1: What are the perceptions of health care professionals regarding limitations to access of primary care for people with schizophrenia in a home health care organization in the rural Midwestern Unites States?

SQ2: What are the perceived barriers for improving practices in meeting the care needs of people with schizophrenia in rural Midwestern home care organizations?

SQ3: What are the perceptions of coordinating laboratory, pharmacy and other areas to improve the current care of people with schizophrenia?

Description of the Sample

Eight health care professionals of varying backgrounds including, a mental health provider, nurses, a pharmacist, and a laboratory professional with experience caring for the mental and physical health of people with schizophrenia in a rural area of a Midwestern state participated in the focus group. Sample inclusion criteria were determined as (a) care professionals that are caring for people with schizophrenia and co-morbid diagnoses, (b) nurses that care for people with schizophrenia and co-morbid diagnoses and (c) pharmacy and laboratory professionals that deliver support to people with schizophrenia and co-morbid diagnoses.

There were six females and two male participants who ranged in age from 28 to 59 years. The participants of the focus group had been caring for the patient population from three to 26 years, and each has experience caring for patients with physical health issues as well. The four nurses had varying backgrounds, but all had experience in-home health care nursing. Three had hospital and clinic experience, and one had experience in long-term care nursing. The practitioner had clinic and hospital experience with current responsibilities for the inpatient care of people with schizophrenia at the local hospital. The pharmacist had experience in both inpatient, outpatient and retail pharmacy. Currently the pharmacist was providing care for people with schizophrenia through retail pharmacy. The laboratory representative has 26 years of hospital and clinic laboratory experience, as well as outreach laboratory services to other health care facilities and home health care patients.

Research Methodology Applied to Data Collection and Analysis

Qualitative analysis of the content was performed on the data collected from the focus group participants. Qualitative analysis is any reduction of qualitative data and organization of materials that identifies common themes and meanings (Patton, 2002). Subjective interpretation of transcribed verbatim text through classification, coding and identification of common themes was a successful method for analyzing the content of the study (Hsieh & Shannon, 2005). The data obtained, and applied coding of the data produced common themes from each research question. The participant's experience and perspectives were explored to ascertain whether the laboratory and/or pharmacy could alone change the current practices for caring for people with schizophrenia while enhancing patient outcomes.

Analysis, Synthesis, and Findings

Findings of related themes and invariant constituents derived from focus group discussion analysis are presented in this section. Verbatim texts from the discussions as well as common themes are shared to further the understanding of the perceptions and meanings of the participants taking part in the focus group. The themes and invariant constituents are presented as they applied to the specific research questions.

SQ1: What are the perceptions of health care professionals regarding limitations to access of primary care for people with schizophrenia in a home health care organization in the rural Midwestern Unites States?

Theme 1. The participants stated that the many patients have stigmas about their illness. This stigma leads to non-compliance in the patients care plan which limits access to the

home health care agency. Theme 1 was derived from the clustered experiences of the participants shared in the focus group and in response to RQ1 (See Table 1).

Table 1. *Invariant Constituents for Theme 1*

Invariant Constituents	Number of Occurrences
Participants stated patients have a belief that there is nothing wrong with them. They are normal.	2
Participants state patients do not want help from health care Provider.	2
Nurses report that patients state they are afraid of being taken from familiar environment.	3

Theme 2. The participants felt that there was a lack of resources in the local area to care for people with schizophrenia. This lack of resources invariably limits access to home health care through a process break in the continuum of care. Theme 2 was gathered from clustered experiences gathered from the participant's responses to question RQ1 (see Table 2).

Table 2. *Invariant Constituents for Theme 2*

Invariant Constituents	Number of Occurrences
Providers reported that support staff is in short supply causing delays in care coordination for patients and allowing for fewer appointment times.	3
Participants explained that there are long waits for patients to get an appointment.	3

Theme 3. Participants noted that a lack of knowledge of resources by local health care providers was also a key barrier to caring for people with schizophrenia. Long wait times for appointments or hospital beds is making it increasingly difficult to care for the patient population. Practitioners were not aware of the full continuum of care; primarily home health care, that are available to them through referral sources. Theme 3 was gathered from clustered experiences gathered from the participants in response to RQ1 (see Table 3).

Table 3. *Invariant Constituents for Theme 3*

Invariant Constituents	Number of Occurrences
Providers reported that lack of outpatient care is adding to clinic workload, and the primary care providers are not able to care for many patients.	5
Participants explained that medication management is time consuming, and multiple providers and pharmacies are being utilized making care coordination difficult.	5

Overall for RQ1, the participants felt overwhelmed by having to care for people with schizophrenia given the lack of resources available to them. Three themes came to light for this question and are explained below. The person with schizophrenia's lack of compliance compounds the issues, because many will not come to scheduled appointments for fear of being hospitalized or taken from their comfort zones. Furthermore, many people with schizophrenia believe that there is nothing wrong and

that they are normal; therefore, are not in need of services. Others will not tell the truth at appointments to prevent being place outside their current living situation.

The lack of support staff in clinics, and the hospital, places more burden on the providers to try and meet the complex needs of people with schizophrenia. Referrals to outpatient facilities and follow up to medication changes and laboratory monitoring creates work for providers that is not in the direct patient care area. This, coupled with long wait times to see a provider makes it difficult to manage the patient demographic, as most of the time, the disease is not well controlled when they arrive for an appointment.

Lack of social workers and outpatient facilities further exacerbates the lack of resource issues that cause this demographic to not obtain quality care needed to sustain better outcomes. Medication management is difficult and often requires input from both primary and mental health practitioners. Primary care providers are often treating the mental health patient, with less than desirable results from the perspective of nursing and pharmacy. The lack of coordination between specialists and organizations increase breakdown points in the continuum of care process.

This first invariant constituent from Theme 1 references the person with schizophrenia's perception of their illness. The lack of acceptance to their issues creates non-compliance in their treatment plans and causes chronic, recurring issues. In support of the first invariant constituent for Theme 1, Participant #2 stated patients were not aware anything was wrong.

There is a lack of insight that anything is wrong with our patients.

Participant #4 added that many will not adhere to their medication protocols

because they feel nothing is wrong.

> The patients first don't believe anything is wrong, and will not take their medications because of this.

The second invariant constituent from theme 1 explains that schizophrenic patients do not want help from health care providers or nurses. In support of the second invariant constituent for theme 1, Participant #2 explains the perceived stigma of having a mental illness to the patient and others, and how that affects their decision-making process.

> I know there's also a stigma that we have a few patients that have refused services because they don't want a nurse in their house; they don't want to appear as needing help; they don't want to go to a psychologist because then they're crazy and I think there's kind of a stigma around mental health, as well.

Participant #1 explained that patients will not be truthful to the health care provider to prevent any changes done to their current care plan.

> Our big thing is we have patients that, one for example, our toughie, is very different with us versus with the practitioner so to keep things consistent, to the practitioner everything's great, everything's grand, when really, it's not but that's how it's going to be portrayed to the practitioner.

The third invariant constituents articulate the fear that people with schizophrenia have of being hospitalized and/or taken out of their current environments. In support of the third invariant constituent for Theme 1, Participant #3 states that patients are anxious and fearful of upcoming appointments.

> I know with a patient, he has anxiety for a month before he knows his appointment is coming up and every single day. It's bad, it's bad to the point that he stated, I'm going to run away or sell my house and I'm going to leave.

Participant #6 added to this by explaining another scenario of a patient showing fear of being hospitalized.

> This patient thinks that if he tells the doctor there's a problem that the doctor is going to hospitalize him. If he says I'm struggling he feels he's going to be hospitalized. He's scared to death of being sent to the hospital and being institutionalized. He's paranoid every single day, that's all he thinks about. He's on Clonopin for it.

Participant #4, explained another incident where fear of being institutionalized will cause the patient to withhold information from their Provider.

> That's my patient's biggest fear. He thinks if he tells the doctors he's struggling she is going to institutionalize him. He'll tell me how he's really feeling, but there's no way he's going to tell her so that's why when I go to the appointments I'm like yes, he's doing wonderful, but there's been this episode or I'll encourage him to tell her, because otherwise there's no way she'd be able to know. He'd be like, nope, I'm doing great, I'm fine. He's scared to death of getting sent away.

The first invariant constituent from Theme 2 explains that shortages in support staff at both the clinics and hospital creates time away from treating patients, and in following their care. Participant #2 explains how this is true from a provider perspective and the adverse effects it has on caring for patients.

> She doesn't have staff like ancillary staff that helps her do anything, so she makes all her referrals and they have her booked back to back to back with patients and no time for scheduling, so she's stuck there until like 8:00 every night charting and she must do all her own referrals.

Participant #5 continued to explain that shortages can affect productivity times in other ways. For example, trying to figure out insurance for patients needing care.

> We don't know what insurance the patient has and it's a huge barrier for the provider as well as myself.

Participant #2 re-enforced her earlier statement by mentioning the complexity of mental health patients.

> I think mental health is a much different specialty. We need social work and referrals a lot more than other specialties.

The second invariant constituent for Theme 2 explained how the long wait times to see a Provider has made it difficult for patients to be seen. Thus, patients are not able to be appropriately referred to the next step in the continuum of care. This referral potentially could be made to the sponsoring organization. Participant #3 stated that psychiatry

appointments are difficult to get within a timely fashion.

> Well the psychiatry appointments can take up to three months.

Participant #6 had a similar sentiment.

> I've had one take over a year.

Participant #2 added her perspective as a Provider.

> Psychology is not so bad, but psychiatry, three to six months and with children it's worse.

The first invariant constituent for Theme 3explains that the lack of outpatient settings and primary care providers ability to care for the schizophrenic patient is a barrier in the capacity to see all the people that need help. This manifests a lack of access to home health care for patients needing home health care but are unable to receive it.

Participant #5 stated that emergency room is utilized for long periods of time, because there is no place to send the patient.

> They keep them in the emergency room if they have psychiatric need until they find a bed which really fills up the emergency rooms.

Participant #4 also stated that acutely ill patients are difficult to place in the local area as well.

> We've had to ship them to other major cities in the geographic area.

Participant #1 added that besides not having any place to put the patients, there are not a lot of Providers willing to treat the mental illness of the patients.

> The medical doctors don't like to do. It depends on the primary care doctor; they don't like to do psychiatric medication adjustments.

Participant #3 added that her experience with primary care is difficult when dealing with prescriptions.

> That's what I've experienced with every single one of my mental health patients is they'll say that they're regular MD's will not touch their psych meds.

Participant #4 agreed with Participant #3, but added that if the patient has a psychiatrist they are more apt not to change medications.

> Especially if they have psychiatrists, and they should.

The second invariant constituent for Theme 3 identifies that medical management of people with schizophrenia is time consuming and not well coordinated among providers, patient and pharmacy services. This barrier was shown not to be dealt with alone by the pharmacy but identified a strategy that would be interesting to pursue for future inquiry. Home health care was identified to improve the overall medication compliance for people with schizophrenia, as nurses are in contact with all the patient Providers. In support of the second invariant to Theme 3, Participant # 5 stated that primary care doctors have many patients on anti-psychotic meds and will not change their medication.

> We have many patients that do not have a psychiatrist and the doctors are giving them just like I said Zoloft is 90% of the time what I see come in and our patients are struggling. We have a current one that high a high PH29 and we continue to tell the doctor and the doctor says they're on Zoloft, 20 is stable PH29 score for them where we're seeing more but the primary doctor is saying that it's fine and this is all.

Participant #6, agreed with that and gave this statement.

> We recently hired a psychiatrist to be a consultative liaison for patients that the primary medical doctors are feeling uncomfortable with handling their medications.

Participant #2, added that the psychiatrist she works with often receives all pharmacy calls for mental health patients; regardless, of the primary doctor.

> The psychiatrist gets all the calls on some days. The pharmacy will just call her directly.

Participant #3, explained experiences in the home health care area, that further identifies the problem, but sheds light on a possible answer for coordinating care for people with schizophrenia.

> A doctor that doesn't have a focus of psychological, psychiatry I don't know if it does more harm than good but I've typically seen a patient goes to the doctor and they say I'm depressed and they come home with Zoloft. It's like across the board you can just expect that that's what they're going to get just generic Zoloft and then if you have issues you call somebody else or we notify the doctors that they're having more issues and the doctor says, they're on Zoloft. That's pretty much, at that point. That's where I've gotten stuck in the home care side is at that point where do you go. They' don't have, or they don't see a psychiatrist, they're only seeing this doctor. They've been given a med that they basically just give to everybody that goes in and says they're upset and it's not working. Something I've wondered is there something we can do in-home care to kind of bridge the gap or is there a way to.

Participant #7 added that his experience is like what others are explaining.

> I think I have quite a few that don't have psych doctors that just have primaries and they're on psych meds. And the primary doctor doesn't manage them and I think that's part of the issue. That if it's not working the doctors and kind of just saying well they're on a med.

RQ2: What are the perceived barriers for improving practices in meeting the care needs of people with schizophrenia in rural Midwestern home care organizations?

Theme 4. The participants explained that the lack of care coordination, social work and overall knowledge of the issues facing people with schizophrenia were the areas that need the most improvement within the organization. The participants shared areas where they see home health care being able to help coordinate the care of people with schizophrenia. Technology expansion was also discussed as a plausible solution to certain care coordination issues that affect the care and outcomes of the patient population. Theme 4 was gathered from clustered experiences gathered from the participants in response to RQ2 (see Table 4). Table 4. *Invariant Constituents for Theme4*

Invariant Constituents	Number of Occurrences
Participants reported that lack of compliance for patients is greatly improved by having appointment reminders given at home visits.	3
Participants explained that services available to home health care patients are not known by referral sources and therefore; underutilized for people with schizophrenia.	5
Participants identified that the use of Tele-health for home health care patients would improve the coordination of care for people with schizophrenia.	3

Overall for RQ2, the participants gave real life accounts of how home care services can be improved to help people with schizophrenia. Participants from outside home care were made aware of programs and services that are available through home care that could help reduce the barriers that are currently being seen in local practices.

As well, discussion on the total continuum of care was expanded once all participants had a better understanding of each other's perspective.

Furthermore, the discovery by participants that tele-health was available to home care patients and could be expanded to other areas of the continuum became an important topic for discussion on how home health care could improve the organizational processes.

This first invariant constituent from Theme 4 explains that patient compliance issues are a main problem in caring for people with schizophrenia. The fact that home care can give constant appointment and medication reminders as an important area of concentration for improvement within the organization. In support of the first invariant constituent for Theme 4, Participant #5 stated, she has witnessed many improvements in patients who receive home care consistently.

> I've seen so many failures on the in-patient unit and continually revolving doors, nobody to set them up with their… there isn't the support at home and encouragement to continue to go to their appointments. I just think that it really does help. I've seen a lot of people really helped by it. There's always going to be the ones that aren't helped because they don't want to be, but there are a lot of people who do want to enjoy the highest quality of life that they can.

Participant #6, also discussed her experience with a person with schizophrenia that had previously with success and now did not have the home health care set up for her upon discharge.

> We have a patient that's been discharged from in-patient twice with no coordination care and she's called us twice saying that she's home with a bag of meds and she doesn't know what to do with them and she wants help. She chased me down one day because I was wearing scrubs and asked if I was a nurse and if we could help her.

Participant #3, explained that patients are non-compliant, but if told they will be discharged from home care service, some will become more compliant.

> But then if you tell them that they're non-compliant and you're going to have discharge them if they continue being non-compliant most of them then snap to because most of them want your help.

This second invariant constituent from Theme 4 explains that there is a lack of knowledge by all participants in the continuum of care. The discussion revealed areas that clinic and hospital staff did not know were available or relevant to people with schizophrenia. In support of the second invariant constituent for Theme 4, Participant #2 explained that transportation to and from appointments is difficult for many people with schizophrenia. She was not aware of the answer that was given by Participant #6.

> The other piece too that a lot of people don't realize as far as transportation with mental health is that they have medical assistance. That's one of the easiest things that we're able to get covered. If they have a metal health diagnosis we're almost always able to get waivers. Mental health encompasses a lot of our patients, if they wouldn't normally qualify, or if they're going to visits for mental health reasons they're able to get through the medical assistance.

Participant #2, explained again the lack of knowledge that her colleagues have in regards to home care.

> I think they aren't going to utilize you guys enough. I think that they won't. I think that when they think of home health care they're thinking of home health aid and more elderly.

Participant #8, also added that other services are available to the home care client that was not known by the practitioners.

> The nice thing is if you can have psychiatry and such in the home you're able to order labs, you're able to do whatever, the nurse can go behind and do lab draws and injections and whatever if the patient is being seen regularly.

Participant #5, was not aware, and had explained her recent missteps with a patient due to lack of knowledge.

I know with another patient I sent them to a clinic to have a blood draw

Participant #1 explained that the first few visits after an inpatient stay can be the most important. She also explained that she has experience from both the in-patient and home care perspectives. She explained that as a home care nurse just a few visits can make a huge difference in the follow up care and compliance after hospitalization.

> We have several that even for a couple weeks when they get out of the hospital. Okay, you're on a few different meds let's make sure you know how to take them and know how they're going to react with you, and then we'll call and check on them every day and let's make sure they're going to be doing okay.

The third invariant constituent from Theme 4 explains that an area that could make a substantial difference in the care of people with schizophrenia would be the utilization of tele-health. The participants discussed how this would help coordinate care in medication management and other care areas. In support of the third invariant constituent for Theme 4, Participant # 2 explained that tele-health has made improvements in some areas of the state, and that it would be applicable to home care.

> Is there a way with like with home care I don't know if you guys do Tele-health type thing, but I know that's become huge? I know they have few companies out of other cities within a couple hundred miles that they have providers there and you just have the setup and they're able to take on patients and meet with patients if you have the equipment. From a home care stand point that would seem to be beneficial but I don't know how realistic.

> Participant #8, explained that sponsoring organization has this partial capability now. This was another area that could be improved on within the organization.

> Well we have tele-health pharmacists here at the home care agency. We get the med lists and the lists are reviewed by pharmacists. The pharmacist then calls and discussed recommendations with the patient. A report is then sent to the primary physician. It is only in the major metropolitan cities now, but we do have it.

Participant #6 explained what the health care agency offers locally that could be utilized now.

> We all have Tablets that we take in the home to do our charting on. Maybe that is something we could expand as well.

RQ3: What are the perceptions of coordinating laboratory, pharmacy and other areas to improve the current care of people with schizophrenia

Theme 5. The participants stated that there are long wait times for prescription refills due to lack of coordination among specialists. Furthermore, due to the lack of patient compliance; coordination of laboratory services is not well established across practices and organizations.

. Theme 5 was gathered from clustered experiences gathered from the participants in response to RQ3 (see Table 5).

Table 5. *Invariant Constituents for Theme 5*

Invariant Constituents	Number of Occurrences
Providers reported that lab results are ordered most times by primary care specialists, but not labs needed to monitor mental illness medications	3
Participants explained that receiving prescription refills are long and patients don't always have their meds.	2

Overall for RQ3, it was determined that there are disconnections between the primary care provider and the mental health providers in coordinating lab work. Primary care providers do not order the laboratory tests that are needed to monitor anti-psychotic

drugs. Although some laboratory tests are applicable to both specialists the ordering provider does not always share the results to all providers in the continuum. Although, information technology has helped make data available the coordination with this non-compliant patient demographic is still troubling.

Medication management is also a problem between the primary care and mental health practitioners. Comfort levels with all medications are not high with all Providers, and who is responsible for prescription refills are causing long wait times for patients to get the needed medications.

This first invariant constituent from Theme 5 explains that patient compliance issues are a main problem in caring for people with schizophrenia. The fact that home care can give constant appointment and medication reminders as an important area of concentration for improvement within the organization. In support of the first invariant constituent for Theme 5, Participant #2 stated, she received laboratory results in her in-basket within the Electronic Medical Record (EMR), but only if she is the ordering provider. She is not aware of laboratory results on her patients, unless the ordering provider forwards them to her.

> I order labs all the time in the hospital, and I am responsible for those. When I am in the clinic, I don't order as many and if they see another doctor I am not aware of what was done, unless that provider includes me. They do not order the lab tests that I need for monitoring.

Participant #2 also mentioned that depending on what doctor she is working with depends on whether she deals with the primary care of the patient.

> Depending on the psychiatrist. I would then deal with their high cholesterol because they’re high cholesterol is second need to their mental health.

Participant #2 also explained that when she ordered blood tests she would not know where the patient went or if they had them done.

> I would order the lab slip, we didn't have a lab there, so I would give them lab slips and what labs I wanted them to get done, they would bring it to whatever lab they went to, and when would I get the labs, sometimes they would get forgotten. It was difficult. It was a huge gap.

This second invariant constituent from Theme 5 explains the difficulty in keeping patients' medication compliant. It is explained how the refill process is sometimes delayed. The home care perspective is also discussed to give ideas for improving care. In support of the second invariant constituent for Theme 5, Participant #6 stated, she has a patient that had long wait times to get a prescription refilled from a provider in an outpatient setting.

> I've had more and more and more patients say that they not only have to wait forever for appointments; they're waiting sometimes two months for med refills, they're waiting two weeks for a call back from a nurse on a medical question.

Participant #5 stated how she sets medications up for a longer period. This is helpful for compliance if the following appointment is missed for some reason.

> Most of them have them in their home where you can set them up for two weeks. Like give them two pill boxes. Put one in the cupboard and one on their counter. That's what we always did for those flighty ones, we gave them a call if we don't get a hold of you you're accountable for it. I'll see you next week. I found that if you chase them around they continue.

Summary

The analysis of the quality and content of the focus group was reported in Chapter 4. A brief explanation of the research method employed, and general results of each research question was addressed. Through analysis of the data, the researcher could

identify five themes that addressed the research questions. These themes were not supportive of the overall study. The laboratory and pharmacy, either alone or together are not able to affect a better outcome in the current practice of caring for people with schizophrenia in the geographic regions studied.

The five themes identified did give information as to what potential the community and the organization has in helping better the outcomes of people with schizophrenia. Stigma about the condition has shown to cause non-compliance in the patient's health care plans. The lack of resources; as well as the coordination of those available has shown to need improvement to better the outcomes as well. Furthermore, it shows that local health care providers are not aware of all the resources that are available to the people with schizophrenia and have limited resources to coordinate the whole continuum of care. Finally, the ancillary areas also show poor coordination and long wait times to serve the people with schizophrenia. Prescription refills and laboratory testing services are often delayed, and information is not received by all parties involved in the patient's care.

The focus group did show an area that has untapped and potentially strong outcome resources. These themes did show that the organization could improve the process of caring for people with schizophrenia. Through further development of home care; including, laboratory and pharmacy services, the home health care organization has the potential to improve patient outcomes of the people with schizophrenia. Chapter 5 will further discuss the results of the data analysis, implications and recommendations for further exploration.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Introduction

Chapter 5 outlines the research findings followed by a brief synopsis of the problem and purpose of the study. The significance of the study, as well as the analysis, synthesis, and evaluation are incorporated. Implications of the findings is explained in correlation with the literature in the health care treatment of schizophrenic patients. Chapter 5 concludes with a discussion of study limitations along with recommendations for future research.

Review of the Research Problem and Purpose

The focus of this study was to determine if the laboratory and/or pharmacy could improve the care and outcomes of people with schizophrenia in a rural Midwestern state. Using a focus group, perceived barriers to access of care for people with schizophrenia, current organizational practice and possible improvements to outcomes were explored. There was one research question with three sub-questions.

RQ1: What are the perceptions of health care professionals that care for people with schizophrenia regarding expansion of laboratory and/or pharmacy services in the home health care setting for the purpose of primary care coordination?

SQ1: What are the perceptions of health care professionals regarding limitations to access of primary care for people with schizophrenia in a home health care organization in the rural Midwestern Unites States?

SQ2: What are the perceived barriers for improving practices in meeting the care needs of people with schizophrenia in rural Midwestern home care organizations?

SQ3: What are the perceptions of coordinating laboratory, pharmacy and other areas to improve the current care of people with schizophrenia?

Significance

Access to health care in rural areas is more difficult than urban areas. Rural areas tend to have higher unemployment and fewer health care coverage options available (Hastings & Cohn, 2013). Affordability of services is hampered by lack of employment and transportation resources (Hastings & Cohn, 2013). Increasing mental health concerns, rising health care costs and the need for increased mental health resources has created a need for new care approaches for people with schizophrenia. Treatment of mental health issues in rural **s**ettings remains a challenge (Taylor et al., 2016). Studies have documented the need for treatment and management of mental health conditions in rural populations (Taylor et al., 2016). Qualitative studies that focus on whether the laboratory and pharmacy can make a significant difference in the outcomes of people with schizophrenia are not available.

This study's importance provided current information that allowed for analysis as to whether the laboratory and/or pharmacy will make a significant difference in the

overall health of people with schizophrenia. The two disciplines have consistent communication and touch points with people with schizophrenia, through frequent in-home laboratory blood draws and pharmacy refills. Other rural parts of the country are utilizing non-trained personnel merely from lack of resources. Because of insufficient support in rural areas, many health care providers are not receiving support, or the only assistance is by individuals without the appropriate training (Hastings and Cohn 2013).

By utilizing a focus group approach this study determined if, through the application of a process change, a significant difference in the overall in-home and ancillary services can produce a new approach to caring for people with schizophrenia. These findings could be useful in identifying new conduit to coordinate the care between physical and mental health care practitioners.

Analysis, Synthesis, and Evaluation

Following the data collection from health care participants in the study's catchment area, analysis and synthesis was performed and subsequent evaluation of the findings was completed. Data was qualitatively analyzed for content to examine the common access barriers, organizational practices and potential solutions for better outcomes of people with schizophrenia. The study explored experiences and perception of the health care practitioners, nurses, and laboratory and pharmacy professionals caring for people with schizophrenia.

Results created relevant insights from the focus group questions and dialogue. Looking closely at the scope of practice and importance of laboratory and pharmacy

professionals in the current situation, it was determined that these areas alone or together could not meaningfully affect outcomes in the care of people with schizophrenia. However, the further development and care coordination of a home health care model of care was identified to coordinate care for people with schizophrenia across multiple care model disciplines. Through the focus group questions and dialogue a closer look at the status of hospital, clinic and home health care settings was provided. Content analysis was performed qualitatively to analyze the focus group discussion.

Eight health care professionals representing, practitioners, nursing, laboratory and pharmacy professionals representing hospital, clinic and home health care practices took part in the discussion. The research question and sub questions were open-ended, and the focus group dialogue was audio-recorded. The subsequent qualitative content analysis was sufficient to review the data.

The data gathered was analyzed by the researcher regarding the experiences and current perceptions of the continuum of care of people with schizophrenia to identify access barriers, current practices and whether the laboratory and/or pharmacy could positively affect the outcomes of the study's patient population. Participant responses identified the following common themes:

1. Many patients have stigmas about their illness. This stigma leads to non-compliance in the patients care plan which limits access to the sponsoring organization and other rural health care facilities.

2. There was a lack of resources in the local area to care for people with schizophrenia. This lack of resources invariably limits access to the sponsoring organization and other facilities through a process break in the continuum of care.

3. A lack of knowledge about resources by local health care providers was noted as a key barrier to caring for people with schizophrenia. Practitioners were not aware of the full continuum of care; primarily homecare, that are available to them through referral sources.

4. The lack of care coordination, social work and overall knowledge of the issues facing people with schizophrenia were the areas that need the most improvement within the organization. The participants shared areas where they see home health care being able to help coordinate the care of people with schizophrenia through technology expansion and care plan administration improvements.

5. There are long wait times for prescription refills due to lack of coordination among specialists. Furthermore, due to the lack of patient compliance; coordination of laboratory services is not well established across practices and organizations. The implications of these findings provide a base of information for the establishment of future research.

Implications of Findings

The realization of the implications of these findings are necessary as a basis for recommending further academic research in the field of health care administration. Bettering the outcomes for people with schizophrenia will provide a higher quality of life

for the patient, reduce the cost of health care, and minimize hospital and re-hospitalization rates. Research sub question one generated three themes. The first theme (The participants stated that the many patients have stigmas about their illness. This stigma leads to non-compliance in the patients care plan which limits access to the home health care agency) showed that people with schizophrenia have a stigma about their condition. This stigma can cause non-compliance by the patient. Fear by the patient of being uprooted from their current living arrangement is a major problem with compliance. Shutting out, or not wanting help from care givers, implies that a lack of trust exists between the health care provider and the patient. It is crucial that health care providers gain the trust of their patients through consistent communication and reassurances for the patient to be open to the care plan. Caregivers must be knowledgeable of the resources and practices that are available to the patient. Honest communication about, and/or changes in, the care plan is key for the patient to understand and trust the plan is effective. Application of behavioral change theory in mental health patients by providing credible information about problem recognition, treatment and compliance from a reliable and trusted source can create behavior changes in the person with schizophrenia (Whealin, Kuhn, & Pietrzak, 2014).

Responses that created the second theme (The participants felt that there was a lack of resources in the local area to care for people with schizophrenia. This lack of resources invariably limits access to the sponsoring organization through a process break in the continuum of care) showed that lack of resources in the study's catchment area were limiting access of patients to the organization. The lack of support staff in the

clinic and hospital setting is not allowing for the proper follow up care to patients after appointment or hospitalization. The appropriateness of using home health care for this patient group was not well understood by the health care providers. From these responses, education for health care providers about what home health care can do to care for people with schizophrenia is necessary. Also, appropriate staff resources to support the process of handing patients off to the next step in the continuum of care is mandatory.

Responses that created the third theme (Participants noted that a lack of knowledge of resources by local health care providers was also noted as a key barrier to caring for people with schizophrenia. Long wait times for appointments or hospital beds is making it increasingly difficult to care for the patients. Practitioners were not aware of the full continuum of care; primarily homecare, that are available to them through referral sources) showed that lack of outpatient and follow up care resources were not available or well known by the health care providers. Long wait times for clinic appointments and the lack of coordination to fill prescriptions for patients to stay compliant was not well established in the area. Responsibility for prescriptions across disciplines is not established and breakdowns in the process were identified. It can be implied from the last two themes, resources in general are either short or not known about. Education to the community mental health practitioners should be completed, so appropriate organizational and community resources can be fully utilized.

Research sub question two generated one theme. Responses that created the fourth theme (The participants explained that the lack of care coordination, social work and overall knowledge of the issues facing people with schizophrenia were the areas that

need the most improvement within the organization. The participants shared areas where they see home health care being able to help coordinate the care of people with schizophrenia. Technology expansion was also discussed as a plausible solution to certain care coordination issues that affect the care and outcomes of the patient population) showed that the organization lacked the social work resource in a home health care setting needed to appropriately care for a patient with schizophrenia. The sponsoring organization is new to accepting people with schizophrenia, and although nurses have been trained in mental health, the application of nursing in home health care is far more complex. However, many ideas were generated on how the utility of home health care could be an effective way of administering the care plan to people with schizophrenia. By constant and consistent communication and the development of tele-health, the study identified that these areas could be further studied for outcome improvement. The use of telemedicine in rural and underserved population has potential for increased access to health care (Neufeld, Case, & Serricchio 2012).

Research sub question three generated one theme. Responses that created the fifth theme (The participants stated that there are long wait times for prescription refills due to lack of coordination among specialists. Furthermore, due to the lack of patient compliance; coordination of laboratory services is not well established across practices and organizations) showed that pharmacy services for people with schizophrenia were not well coordinated for patients with multiple doctors. The resulting wait times for prescriptions to be filled increases the non-compliance rate for people with schizophrenia. Unfortunately, many primary care physicians lack easy access to patients' psychiatric

records, specialists' recommendations, and documentation of prescriptions from other providers (Phelps, Levey, Klie, & Russo, 2015).

Laboratory testing is not well coordinated through one laboratory. Results being received by the appropriate care provider was also lacking because of lack of information and unlike information systems used between organizations in the area. It is implied that without someone managing both aspects, the ancillary services could not be well coordinated. Neither of these two professional areas has the scope of practice to coordinate both areas alone. Nursing however, does have the scope of practice to coordinate and lead the research in-home health caretaking an active role in the further development of these areas.

The data indicated that the laboratory and/or pharmacy could not affect the outcomes of people with schizophrenia alone. The data did show that the development of home health care and further education of how it can be utilized by health care practitioners should have a substantial benefit to the outcomes of people with schizophrenia. A large gap exists between the traditional hospital and clinic care settings and the home health care settings in understanding the benefits of home health care to the schizophrenic patient. The Patient Centered Medical Home is a philosophy and strategy used across the United States to give patients the proper care through a team approach. However, this strategy has not been implemented in this study's geographic area. Home care is available but also in short supply. Home health care has not historically been utilized in the care continuum with people with schizophrenia. The focus group identified revelations by health care providers and home care professionals on how

together a meaningful difference could be made in the lives of people living with schizophrenia.

Discussion of the Conclusions in Relation to the Literature in the Field

The research of laboratory and/or pharmacy professionals being able to affect the outcome s for people with schizophrenia is not established. The main research question of the study was the first that specifically addressed this possibility. The conclusions of the study showed that laboratory and pharmacy services are a part of the process for treating people with schizophrenia. However, the individual professionals of these areas do not have the qualifications or scope of practice to effectively manage the care of people with schizophrenia.

The literature strongly shows a shortage of primary care physicians in the country, and the aging population increasing their need for care. This demand for health care services coupled with a limited supply of resources was shown to be true in this study as well. The rural Midwestern state did show a strained supply of care givers, facilities and organizations to properly care for the current schizophrenic population. Lack of primary care for people with schizophrenia diminishes the possibility of long-term independence. Having an individualized care plan for a patient with schizophrenia increased his or her independence (Roldán-Merino et al., 2013). This study also concluded that it reduced family perceptions of burden. Further studies in this area could also help determine the long-term affects the individualized care plans have on patient compliance and stigma.

Newer models of care have been implemented across the country. For this study, only those available in the catchment area were considered. However, the emergence of patient centered homes and community support programs have shown some success in improving the overall quality of people with schizophrenia (Pomerantz et.al., 2014). These ideas are creative, but not available in the study's geographic area. Without legislation to earmark funding for this specific group it is difficult to maintain long-term. (Drake & Latimer, 2012). Recent unemployment, criminalization, and shorter life span for people with mental illness is a major concern (Drake & Latimer, 2012). These problems have been made worse by poverty, reduced housing dollars and migration to inner cities where unemployment, crime and drugs are on the rise (Drake & Latimer, 2012).

In the state where this study has taken place many of the study's findings are in stark alignment with the state's initiatives. For example, the state's Department of Health states the health care home is the centerpiece for health reform. It is focused on redesigning the care delivery models in the state. The goals of the model are to:

1. Continue building a strong primary care foundation to ensure all people in the state can receive team-based, coordinated, patient-centered care.
2. Increase care coordination and collaboration between primary care providers and community resources to facilitate the broader goals of improving population health and health equity.
3. Improve the quality and the individual experience of care, while lowering health costs.

Limitations of the Study

The greatest limitation of the study is the intrinsic lack of generalizability, because the study has a qualitative design and thus lacks randomization that would allow for differential statistical analysis. Qualitative research studies are meant to study a specific issue or phenomenon in a certain population, hence generalizability of qualitative research findings is usually not an expected attribute (Leung, 2015).

Careful instruction and detailed rationale for the study was provided to the participants prior to the focus group to ensure credibility and minimize bias in the results. Limited comparative literature or research was available prior to the study. This limitation caused the research and sub questions to be broad to capture a wide variety of answers. Since, no previous data was available, the data analysis resulted in more general themes. This, did however, leave a good starting point for further study.

The size of the study group participants was also a limitation. Although, the number of participants is acceptable for a focus group, the group consisted more of nursing than any other representative group. The main question of the study pertained to ancillary services and their effect on the care of people with schizophrenia; yet, only 25% of the group was represented by these areas. However, contribution from the other members regarding their perspective of the ancillary areas proved valid and in fact, a new topic for future exploration. Future focus groups in this area should have more participants to help strengthen validity and reliability.

Recommendations

The researcher recommends further education, training and integration across the continuum of care with studies in relation to the other themes that were identified. Because of the findings regarding the lack of resources; studies with narrow scope from different transition points in the continuum of care need to be conducted. Examples, of these studies may include the transition of patients from a hospital stay to homecare. Identifying the barriers in the inpatient setting through the referral process would be very beneficial for better overall care.

Studies to further understand the physician and mid-level practitioners understanding of the scope of home health care services, as well as, responsibility of care would be very helpful. The lack of continuity of information exchange of home health care mental health patients was evidenced in the study's findings. These breakdowns in communication would be better understood by further qualitative studies.

Home health care services for people with schizophrenia is a good option, but rules and funding do not always allow for the appropriate number of visits for the best compliance and outcomes. Further studies on day programs would be valuable to ascertain information on better compliance and reduce the stigma that patients feel about leaving their homes. Day programs are planned in the study's catchment area for next year and will be a valuable addition to the current lack of resources.

Further quantitative studies in the financial areas of mental health treatment also need to be expanded. Studies to evaluate if more home health care and/or outpatient resources, would reduce costs over time for this patient population. Reduction in hospitalization rates would also need to be studied after program or resource additions

have been made. Further research to establish consistent care plans for patients transferring from a specific setting back to a home setting are necessary. Further research should be conducted to gauge the full understanding of the gaps between physician specialists with an emphasis on collaborating to identify weaknesses from both perspectives. Medical physicians, psychiatrists, mental health nurses, home health care nurses, social workers and home health aides are all cognizant of the problems faced by the people with schizophrenia; but, coordination by all is lacking. Medical physicians will need a better understanding of the follow up care that is needed; as well as the process for referring to homecare. Education of current practitioners and students needs to be coordinated for future success in treating people with schizophrenia. Psychiatrists need to understand the issues mental health and home health care nurses are facing with each patient. Medical students need to be taught the utilization of home health care for mental health patients and how it can be best implemented from a clinic or hospital setting.

Ongoing community based education is needed for all professionals that care for people with schizophrenia, so a network of support can be established for the health care team as well as the patient. Sensitivity training should be established for all health care providers regarding the stigma that people with schizophrenia feel toward their own disease. This was an obvious theme in this study as others that were mentioned in the literature review.

For rural areas, the community needs to be informed and understand the complexities of caring for people with schizophrenia as well as the challenges faced by

the patient. Community based care needs to be further studied in rural areas. These should include the use of volunteer groups to make check-in phone call to people with schizophrenia further guaranteeing they are staying medication compliant, and are not having any manic episodes. A simple questionnaire could be established to screen for any possible problems. Triage nurses need to be available for volunteers to call, if suspecting a possible problem with the patients. Schizophrenia; as well as other mental illness, are a community problem. It takes community awareness and understanding for these patients to be cared for properly.

Families of people with schizophrenia need to be assimilated into the research as well. Experiences from everyday life would hold value for trending and process change ideas. More legislative dollars are needed to bring the stories and experiences of the family and how it affects daily life in the community to raise awareness and understanding of the disease. An effort to understand and accept people with schizophrenia would alleviate much of the stigma that goes along with the disease. This would also aid in reducing the number of people who go undiagnosed for many years and do not receive the proper treatment. This too, exacerbates the societal perspective of the disease.

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APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

> Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)
>
> Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

> Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date	Matthew Zimmer 10/28/2017
Mentor name and school	Dr. Christopher Miller Capella University