Barriers to and facilitators of initiation and retention in behavioral health services in Cape May County, New Jersey

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Abstract

Mental illness is shown to increase healthcare costs and decrease quality and length of life. Barriers to access care must be removed in order to help increase access to vital behavioral health services. This project is a mixed methodology study including a retrospective chart review and qualitative analysis of barriers to access to care. The researcher worked with Dr. Carl Vaccaro, DO at the AtlantiCare Primary Care Plus practice in North Cape May, NJ to identify barriers to access to behavioral health care for patients aged 18 and over referred from the primary care setting. The patients participating in the study all had a behavioral health diagnosis identified by the primary care provider. The researcher also worked with the provider to identify real and perceived structural and attitudinal barriers to referring patients for behavioral health services in this area. Several attitudinal and structural barriers were identified as a result of this research. Once barriers were identified, the researcher provided a report to the AtlantiCare organization that included the barriers as well as evidence-based interventions to address the barriers.

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Introduction

Mental illness is prevalent in the United States. The advanced age of a majority of behavioral health practitioners, the decreased number of new practitioners entering the field, and the increased number of persons being diagnosed with mental illness contribute to issues with access for many struggling with a behavioral health diagnosis. Cape May County, New Jersey is a small county at the southernmost tip of New Jersey. With its low socioeconomic status (U.S. Census Bureau, 2015), high rate of substance abuse (Zhu, 2016), and high seasonal unemployment rate (U.S. Department of Labor, 2016), Cape May County has large numbers of individuals struggling with behavioral health concerns (East Mountain Hospital, 2013). Unfortunately, the ratio of individuals to behavioral health providers is more than twice the New Jersey state average (East Mountain Hospital, 2013). This shortage of providers, coupled with the socioeconomic environment of the area, contribute to multiple barriers that individuals face when attempting to intiate or engage in behavioral health care (J. Monroe, personal communication, September 15, 2016).

While little research related to behavioral health outcomes exists from this demographic area, the need is great. This project will serve to identify and measure barriers to initiation and retention in behavioral health care and provide an evidence-based framework for the removal of these barriers within the Cape May County area.

Background and Significance

Mental illness (MI) is defined in the Diagnostic and Statistical Manual – Fifth edition (DSM-5) as “a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning.” (American Psychiatric

Association, 2013, p. 20) Mental disorders are often associated with occupational and social impairment or some sort of interruption in another area of life. The American Psychiatric Association (APA) further refines the definition of mental illness by citing that appropriate responses to stressors (such as a loss or death of family member or loved one) are not considered mental disorders. (American Psychiatric Association, 2013).

Mental illness knows no socioeconomic or demographic bounds. The prevalence rate of mental illness in the United States (U.S.) in 2014 was 43.6 million adults (age > 18 years), or 18.1% of the U.S. population (Center for Behavioral Health Statistics and Quality, 2015) and up to 50% of these persons go untreated (Insel, 2015). Suicide was the 10th leading cause of death in 2014 with 42,000 people committing suicide. It was also a leading cause of death for individuals between the ages of 10 and 34, second only to accidental injury (National Institute of Mental Health, n.d.).

Cost of Mental Illness

Behavioral health care costs the U.S. health care system around $113 billion annually. This burden on the system increases to approximately $300 billion a year when the costs of lost wages and earnings and disability benefits are factored in as mental illness is the number one reason cited for disability in the U.S. (National Committee for Quality Assurance, 2014). Major Depression Disorder (MDD), which affects around 6.7% of the population of the U.S., is linked to poor work performance and contributes to the loss of upwards of $2 billion monthly in lost work productivity (National Committee for Quality Assurance, 2014). Additionally, 1.1% of U.S. adults have a diagnosis of schizophrenia which led to an economic burden of around $62.7 billion in 2002 (National Committee for Quality Assurance, 2014).

Illicit drug and alcohol abuse costs the system more than $700 billion per year in costs related to health care, lost productivity, and crime. Out of the 23.1 million Americans (8.9% of the U.S. population) who needed substance abuse treatment in 2012, only 2.5 million people (1%) actually received it. The death of more than 90,000 Americans annually can be contributed to the abuse of alcohol, illicit, and prescription drugs (National Committee for Quality Assurance, 2014).

Unfortunately, the burden on the healthcare system is only increasing. According to the Surgeon General's Report on Mental Health (U.S. Department of Health and Human Services, 1999), direct health care costs for mental illness totaled $69 billion in 1996 (approximately $104.9 billion in 2014). The *actual* expenditures for 2014 were $113 billion (National Committee for Quality Assurance, 2014). This equates to a 7.6% increase over 18 years.

Cape May County (CMC), in particular, saw a 22% increase between 2007 and 2011 in the number of persons who were evaluated at the emergency department (ED) for behavioral health related issues with 2.9% of CMC adults visiting the ED in 2011 for mental illness (East Mountain Hospital, 2013). In a survey of 1100 local community members, 54 % of survey respondents endorsed feeling depressive symptoms and 75% indicated feeling symptoms of anxiety within the previous month (Cape May County Community Health Improvement Plan Collaboration, 2007).

Existing policies fail to address the complex and multi-dimensional effects of mental illness. There are currently at least 27 bills before Congress that specifically address behavioral health. These bills cite a wide array of issues surrounding behavioral health from early identification and prevention to recovery (govtrack.us, n.d.). Current legislation promotes non-discriminatory practices by including mental illness as a disability under the Americans with

Disabilities Act but it doesn’t reach far enough. The American College of Physicians asserts in their position paper on integrated primary care (Crowley & Kirschner, 2015) that these laws need to be strengthened and reinforced. Greater insurance coverage and reimbursement rates, both of which are perceived as barriers to improved behavioral health services, need to be addressed. In addition, strengthening these laws will help to reduce the stigma associated with mental illness (Crowley & Kirschner, 2015).

Treatment Approaches

It is widely accepted that mental illness is a disease process requiring treatment from a systematic approach. There are many treatment options for mental illness ranging from medication administration to electroconvulsive therapy, each of which has an evidence base to demonstrate effectiveness. These treatments vary according to the disease process, symptom presentation, and other factors (even the client’s genetic mapping). Traditionally, treatment for mental illness occurs in a behavioral health clinical setting where the client sees a psychiatrist for the initial consult and is prescribed medications. However, with 55% of psychiatrists being aged 55 years or older and the number of graduates from psychiatry training programs decreasing (Insel, 2011) while the incidence of mental illness is on the rise, the U.S. is facing a shortage of psychiatric practitioners to address mental illness.

A joint effort campaign conceptualized by five hospital systems in the South Jersey region led to an in-depth qualitative report regarding the state of the behavioral health care system in the region (South Jersey Behavioral Health Innovation Collaborative, 2016). The data analyzed reveals that South Jersey’s approach to behavioral health care is problem-centered, leading to a disjointed approach to treatment. In the report, words like “hierarchal”, “authoritarian”, and “institutional” were used to define the behavioral health system. In addressing substance use disorder treatment, the system was cited as having a “moral failing” with “under-trained staff” and “inpatient detoxification and rehab focused” (South Jersey Behavioral Health Innovation Collaborative, 2016). The findings from the South Jersey Behavioral Health Innovation Collaborative (2016) demonstrate that the healthcare system in South Jersey functions contrary to the patient-centered biopsychosocial approach to healthcare that is supported by current research.

In addressing behavioral health and illness, many questions remain unanswered. How can persons within the behavioral health field work to decrease the stigma associated with mental illness? How can healthcare workers improve access to behavioral health services in spite of the obvious deficit of trained behavioral health professionals? What can be done to enhance the relationship between providers from all fields to improve health outcomes for persons with a behavioral health diagnosis?

Current interventions to address behavioral health concerns are effective if actual and perceived structural and attitudinal barriers can be removed. Removing these barriers is achieved through recovery-oriented care which fosters the therapeutic alliance, is person-centered, and involves shared-decision making (Dixon, Holoshitz, & Nossel, 2016). According to the U.S. Department of Health & Human Services (New Freedom Commission on Mental Health, 2003), the four dimensions of recovery-oriented practice include interventions that foster an organizational commitment, enhance strong working relationships with clients, promote citizenship, and support client-directed goals.

In many cases, the primary care provider (PCP) is the first professional to identify an undiagnosed behavioral health issue (Crowley & Kirschner, 2015). As there is an established therapeutic rapport, patients may feel a sense of comfort in sharing their struggles with their PCP knowing that there is an ethical obligation to respect and value the patient's confidentiality. At the same time, PCPs are often ill equipped to handle the complex nature of mental illness and feel the need to refer patients out to behavioral health services in the community.

Needs Assessment

The need for behavioral health services expands beyond the CMC area. The researcher reviewed international, federal, state, and local priorities to determine what is currently being done to address the need for behavioral health access and enable to removal of barriers to access to care. Additionally, the researcher conducted a SWOT (Strengths, weaknesses, opportunities, and threats) analysis to evaluate the needs for behavioral health services in the CMC area.

International Priority

The need for behavioral health interventions is not just a local need – it is an issue being addressed at every level of government around the world. For the first time in history, behavioral health has been addressed as a priority by the United Nations (UN) (2015) in their Agenda for Sustainable Development. The UN has cited behavioral health issues as "a major challenge for sustainable development" (United Nations, 2015, declaration 26). They are encouraging governments to address mental illness as they would any other health challenge.

Federal Priority

One of the aims of the U.S. Healthy People 2020 Initiative is to ensure access to mental health services to improve mental health outcomes (U.S. Department of Health and Human Services, 2017). The U.S. Department of Health and Human services cite several objectives including reducing suicide rates and major depressive episodes. They also seek to expand treatment options and improve quality of life by increasing screening for depression in primary care offices and boosting the number of primary care facilities that offer integrated behavioral health services (U.S. Department of Health and Human Services, 2017).

State Priority

According to the "America's Health Rankings Report" from 2016 (United Health Foundation, 2016), New Jersey ranked 24th in the country for excessive drinking, 26th in the country for drug deaths and health insurance status, and 33rd in the country for public health funding. Additionally, 10.7% of the population surveyed in New Jersey report frequent emotional disturbances, ranking New Jersey 18th in the country for emotional distress (United Health Foundation, 2016). Despite the lack of public health funding in the state, the New Jersey Division of Mental Health and Addiction Services (DMHAS) continues to provide various services in the state of New Jersey. DMHAS provides resources needed to address addiction and mental health services to help improve the health of the population. Additionally, DMHAS fought for Medicaid expansion to cover more mental health services (Division of Mental Health and Addiction Services [DMHAS], n.d.).

Local Priority

At the local level, there are few government-led initiatives in the CMC area to address behavioral health barriers. In 2007, the government made recommendations for ways in which to address health disparities (including mental illness) in the Cape May County Community Health Improvement Plan (Cape May County Community Health Improvement Plan Collaboration, 2007) yet there remains a gap in service access. The researcher reviewed the DMHAS Directory of Mental Health Services (NJ Department of Mental Health and Addiction Services [DMHAS], 2016) for the CMC area and noted that most acute behavioral health services (including short-term inpatient psychiatric stabilization) are only available through a healthcare system in another county. Additionally, the researcher noted that there is only one major behavioral health provider organization in CMC (NJ Department of Mental Health and Addiction Services [DMHAS], 2016).

SWOT Analysis

A SWOT analysis (Weihrich, 1982) was conducted at the AtlantiCare Primary Care Plus practice in North Cape May, New Jersey (Figure 1).

Strengths. Strengths identified include experienced leadership, engaged executives, a good brand value, and a loyal customer base. Additional strengths include a strong financial position, cutting edge technology, a highly prepared staff, and a strong market share. AtlantiCare is also flexible and responsive to the market needs of the communities they serve and committed to their core values.

Weaknesses. Weaknesses identified include a lack of reach into the CMC area and a lack of data regarding efficacy of their current interventions in CMC (as they are just now starting to work in the area). Another weakness identified was that there was one provider covering two practices. This led to a loss in their customer base resulting from customer dissatisfaction.

Opportunities. Opportunities identified were many. First, because there are insufficient mental health resources in this community, there is a great growth rate potential. Growth potential is increased as a result of the major market competitor’s poor reputation and long wait times for appointments. Additionally, the organization has a clinical staff that is aware of the need for change and leadership that promotes ingenuity. Finally, there have been several recent government regulation changes aimed at increasing access to behavioral health services.

Threats. The researcher must be conscientious of the increased demand on staff. There is potential that the intervention will increase the strain on an already overloaded infrastructure and potentially create budgetary restrictions, as well. The competition from the other behavioral health provider in the community (who currently has almost the entire market share) is another identified threat along with the community's reaction to new service providers. The CMC area holds additional threats, as well, including the seasonal culture of the area, insufficient health insurance coverage for residents, and a lack of willingness of the current political leadership to acknowledge social issues in the community.

While conducting the SWOT analysis, the researcher noted that there is an extensive wait list to refer clients with behavioral health needs to behavioral health services in the CMC area. Some persons with non-urgent behavioral health needs must wait for as long as 8-9 months for an initial consult (J. Monroe, personal communication, September 15, 2016).

Problem/Purpose Statement

Untreated mental illness creates a burden on the healthcare system that expands beyond medical needs. Lost productivity, legal concerns, and the death toll from untreated mental illness all add to the urgency to remove barriers to access to care. Barriers, however, are not simply structural, such as lack of access to care, but are also attitudinal, such as self-stigma and societal stigma. It goes without saying that barriers cannot be removed until they are first identified. As such, the researcher will seek to identify the barriers to access to and retention in care within the primary care setting in North Cape May, NJ.

Clinical Question

In adult patients identified with a behavioral health diagnosis from January 1, 2017 to January 1, 2018 at a primary care office in North Cape May, NJ, what barriers and facilitators to accessing behavioral health services will be identified through a retrospective chart review and telephone interviews?

Aims and Objectives

Aim #1: To evaluate the patient's experience of actual and perceived barriers to initiation of or retention in outpatient behavioral health services after being referred from their primary care physician (Phases 1 – 2)

Objective #1: The researcher will conduct a comprehensive chart review of patient charts from the AtlantiCare Primary Care Practice from January 1, 2017 – January 1, 2018 and identify all patients with a behavioral health diagnosis (Phase 1).

Objective #2: Using the information obtained from the comprehensive chart review, the researcher will define the prevalence of mental illness in this population (Phase 1).

Objective #3: The researcher will separate the names of persons identified with a behavioral health diagnosis in the previous 12 months into two separate lists – List one will be persons referred to outpatient behavioral health services and list two will be persons not referred to outpatient behavioral health services (Phase 1).

Objective #4: The researcher will conduct phone calls to persons on list one to determine the following (Phase 2):

A. Did the patient initiate outpatient behavioral health treatment as referred by their provider?

B. If treatment was not initiated, the researcher will utilize the Barriers to Access to Care Evaluation (BACE-3) (Clement, et al., 2012) tool to determine what actual and perceived structural and attitudinal barriers were faced by the patient in initiation of outpatient behavioral health services.

C. If treatment was initiated, is the patient still engaged in outpatient behavioral health services?

1. If the patient is still engaged in outpatient treatment, the researcher will utilize the BACE-3 tool to determine what actual and perceived structural and attitudinal barriers were faced by the patient in initiation of outpatient behavioral health services.
2. If the patient is no longer engaged in outpatient treatment, the researcher will utilize the BACE-3 tool to determine what actual and perceived structural and attitudinal barriers were faced by the patient in initiation and retention in outpatient behavioral health services.

Objective #5: The researcher will ask each subject one open ended question that will allow the researcher to analyze identified facilitators to engagement in behavioral health services (Phase 2).

Aim #2: To evaluate and describe the primary care provider’s actual and perceived barriers to referral of patients to outpatient behavioral health services (Phase 2)

Objective #1: The researcher will conduct a qualitative interview with the primary care provider to identify the actual or perceived barriers to referring persons on list two to outpatient behavioral health services.

Aim #3: To provide a report to the AtlantiCare organization to address the identified barriers (Phase 3)

Objective #1: The researcher will utilize the information obtained through the phone calls with patients to formulate a list of barriers identified

Objective #2: The researcher will evaluate the most current literature for evidence-based interventions to address the barriers

Objective #3: The researcher will create a presentation addressing the identified barriers and offer evidence-based interventions to address the barriers

Objective #4: The researcher will present findings to the leadership of the AtlantiCare organization

Review of Literature

Health care practitioners in CMC, New Jersey are well aware of some of the barriers to initiation and retention in behavioral health care services however, there have been no studies conducted to date that support their theories. The primary care provider with whom the researcher is working has noted several barriers to referral for behavioral health services. Additionally, he has provided the researcher with the feedback he has received from his patients regarding their experience with barriers, as well.

Person-centered care is a critical component in the removal of barriers to engagement in behavioral health care (Dixon, Holoshitz, & Nossel, 2016). Although research supports person-centered care, there are many considerations when planning interventions for patients in the primary care and behavioral health care setting. These include (but are not limited to) time restraints, availability of providers and resources, insurance coverage and financial implications, psychosocial factors, health beliefs, and the patient’s perception of need for treatment (Andersen R. M., 1995; Dixon, Holoshitz, & Nossel, 2016). Although there is literature detailing societal (and some local) barriers to care, there is no research that health care systems can use to formulate interventions geared toward the CMC, New Jersey area.

Research review process

The researcher conducted a data search (Appendix B) utilizing Academic Search Premiere, Biomedical Reference Collection (Comprehensive), CINAHL, MEDLINE, and

Nursing and Allied Health Collection (Comprehensive). The search was conducted using the search terms [“Barriers” AND “Behavioral health treatment”] OR [“Barriers” and “Mental health treatment”]. The initial search returned 2027 results. After duplicates were removed, 1303 records remained. The researcher excluded 819 records that were not written in English, not peer reviewed, and written prior to 2012. Of the remaining records (n=483), 367 were removed because the scope was too narrow or were unrelated to the topic. The researcher was left with 116 articles. Of those 116, articles were removed because they were either unrelated to the particular project (n=25), were unrelated to primary care (n=6), or were focused on integrated primary care (n=3). More were removed because their scope was too narrow (n=64), were inappropriate resources (n=3; 1 was a news brief and the 2 were commentaries), or were unavailable (n=5). The researcher was left with 10 articles resulting from the search for the meta-analysis. The researcher identified an additional 10 articles from other sources, as well.

Historical information

In 2003, the World Health Organization (WHO) generated a report entitled “Investing in Mental Health”. This report analyzed the state of behavioral health care around the world. According this report, there are still significant gaps between need for behavioral health services and available community treatment options. The treatment gap (percentage of individuals who health services but do not receive these services) in behavioral health is anywhere from 44% - 70% and is the result of several different factors. The WHO cites poverty as one of the major contributing factors to the treatment gap. In addition, lack of public health programs, lack of funding for behavioral health services, stigma, discrimination, and lack of policy geared toward behavioral health care services contribute to the lack of access to treatment for those who need it (World Health Organization [WHO], 2003).

Current background information

Current research seeks ways to identify and remove barriers to access to behavioral health services. According to the National Comorbidity Survey Replication, there are multiple factors that hinder persons with mental illness from seeking or staying in behavioral health treatment (Mojtabai, et al., 2011). These factors vary by severity of clinical presentation as well as by socio-demographic status. This project seeks to determine what those factors are within one primary care setting in CMC, New Jersey and to seek evidence-based resolutions to those which are amendable. As a result, the AtlantiCare health care organization can utilize the information obtained through this research study to begin to address these barriers, remove those that are amendable, and improve patient outcomes.

Literature Synthesis

Identifying barriers and facilitators to access to care and utilizing evidence-based interventions to address these barriers will enhance utilization of and retention in behavioral health services in CMC. The first step in this process is identifying the barriers and facilitators within this population.

The literature review conducted by the researcher yielded comprehensive results related to barriers and facilitators of behavioral health care. The researcher noted, however, that there is variability from article to article in the manner in which the barriers are coded and identified. For example, the WHO World Mental Health surveys (Andrade, et al., 2014) separate the barriers into structural and attitudinal barriers. Gagné, Vasiliadis, & Préville (2014) and Fikretoglu & Liu (2015) code their barriers into acceptability, availability, and accessibility barriers. Although the individual barriers are similar, comparing results between studies may create gaps in the knowledge base for researchers or leave them with additional work to compare the study results.

For this paper, the researcher will be utilizing the structural and attitudinal barriers codes. However, the researcher will bring in results from other studies when addressing specific barriers rather than concepts.

The researcher identified many different structural and attitudinal barriers within the literature. Andrade, et al. (2014) identify attitudinal barriers, in particular a low perceived need for treatment, as the most commonly reported barriers among survey respondents with serious mental illness as well as respondents with mild/moderate mental illness. In contrast, the study conducted by Dockery, et al. (2015) found that survey respondents cited a different attitudinal barrier, concern that it may harm their chances of employment, as the primary treatment barrier. Additional attitudinal barriers identified in the literature include stigma and self-stigma (Clement, et al., 2015; Dockery, et al., 2015) and self-reliance (Andrade, et al., 2014; Jennings, et al., 2015). Stigma and self-stigma includes (but is not limited to) other attitudinal barriers including discomfort with discussing the issue (Sorkin, Murphy, Nguyen, & Biegler, 2016) and a fear of someone else finding out about the behavioral health issue (Sorkin, Murphy, Nguyen, & Biegler, 2016).

Noted within the research are several structural barriers, as well. Walker, Cummings, Hockenberry, & Druss (2015) cite a lack of insurance as a barrier to care while Fikretoglu & Liu, (2015) cite financial considerations (such as an inability to afford appointments or copays for services), transportation issues, and scheduling/logistical issues (such as scheduling conflicts with work or school and childcare). Additionally, difficulty obtaining an appointment was noted by Sorkin, Murphy, Nguyen, & Biegler, (2016) in their study.

Literature supports the assertion that these barriers are different among different population groups. For example, Gagné, Vasiliadis, & Préville (2014) noted that, although men and women are equally likely to consult for depression, behavioral health service utilization was greater for women between the ages of 25 – 64 and men over age 65 than their gender opposite counterparts. Additionally, men were more likely to consult *only* their PCP for behavioral health issues while women were more likely to consult *only* behavioral health professionals (Gagné, Vasiliadis, & Préville, 2014).

Sorkin, Murphy, Nguyen, & Biegler (2016) noted racial and ethnic differences in relation to treatment seeking behaviors. Asians & Pacific Islanders (API) and Hispanics cite feeling uncomfortable talking to a professional as a barrier to initiating treatment more than Non-Hispanic Whites (NHW). Hispanics, however, were less concerned about someone finding out about behavioral health issues than API while both API and blacks had a significantly higher concern for this area than NHW. Hispanics also cited difficulty getting an appointment twice as often as NHW did in this study (Sorkin, Murphy, Nguyen, & Biegler, 2016). In support of these findings, Walker, Cummings, Hockenberry, & Druss (2015) cite that Black and Hispanic study participants were less likely than NHW to receive treatment for a behavioral health disorder.

Walker, Cummings, Hockenberry, & Druss (2015) also cite that insurance status impacts a client’s ability to initiate and engage in treatment, as well. Blacks and Hispanics were more likely to be uninsured that NHW. Persons with mental illness are more likely to be on Medicaid or uninsured than those without a reported mental illness and persons without insurance were significantly less likely to receive treatment (as many as 75% of persons in the study) than persons with insurance. As a result, persons without insurance reported unmet mental health needs more frequently than those with insurance. This study demonstrates that insurance status has a large effect on the receipt of mental health care and the perception of unmet mental health care needs (Walker, Cummings, Hockenberry, & Druss, 2015).

Fikretoglu & Liu (2015) note several variabilities in barriers based on education, coping ability, and psychological well-being. Persons with a post-secondary education reported attitudinal barriers five times less than those without a post-secondary education. High coping ability and psychological well-being were negatively associated with structural barriers including an inability to pay and lack of access due to transportation, childcare, or scheduling issues. In contrast, having one or more children between the ages of 6 – 11 was associated with a 3 times higher probability of reporting these structural barriers (Fikretoglu & Liu, 2015).

Comorbidities that accompany behavioral health issues (in particular, substance use disorders) also contribute to barriers to treatment (Chen, et al., 2013). Study participants with comorbid MDD and substance use disorders utilized more mental health services but verbalized a higher unmet need for this care than those without both diagnoses. Persons endorsing polysubstance use utilized more mental health services of all types while those with an alcohol use disorder utilized more medication treatments. In all populations studied (those persons with MDD with and without co-occurring polysubstance use, alcohol use, and non-alcohol drug use), the greatest barrier cited to behavioral health care was the financial barrier. This contrasts with findings discussed earlier in this paper (Andrade, et al., 2014; Dockery, et al., 2015) where attitudinal barriers were cited as the most significant barriers to service utilization (Chen, et al., 2013).

Based on the literature review, there is no “one size fits all” model for addressing barriers to initiation of and retention in behavioral health treatment. For a health care organization to successfully address these barriers, they must know the barriers within the population they are seeking to assist. This doctoral project will serve to obtain this information from the population of the AtlantiCare Primary Care Plus practice in North Cape May, NJ as there is no current research that addresses barriers in this population.

Theoretical Framework

The researcher utilized the Andersen-Newman Behavioral Model of Health Service Use (Andersen & Newman, 1973; Andersen, 1995) (Figure 2) as a framework to understand human behavior in relation to the utilization of behavioral health services. The purpose of the framework is to evaluate the barriers and facilitators to health service utilization to enhance access to health care across the spectrum. The framework looks at a person's utilization of health care services through the lens of three sets of characteristics. The characteristics in the original model are predisposing factors, enabling factors, and need factors (Andersen & Newman, 1973).

The first set of characteristics is the predisposing characteristics (Andersen & Newman, 1973). These characteristics existed prior to a person's need for healthcare services. They include areas such as education, ethnicity, social support, culture, and occupation (social components). The second set of predisposing characteristics is a person's health beliefs. This includes their knowledge, values, and attitudes toward the health care system. The third set of predisposing characteristics is a person's demographics including their gender and age (Andersen & Newman, 1973).

The second set of characteristics is the enabling characteristics (Andersen & Newman, 1973). These are the characteristics that would provide the means or ability for (or "enable") a person to seek medical care. These factors include personal factors and community factors. Personal factors include means to access services in addition to the knowledge and ability to obtain medical care, health insurance, financial ability to obtain services, ease of access (travel and appointment times), and a quality therapeutic relationship with the provider. Community factors include areas such as the availability of services within the community and the length of wait times, bus schedules, and fare-free transportation options (Andersen & Newman, 1973).

Finally, Andersen (Andersen & Newman, 1973) addresses the need factors. These factors include the person’s perception of their need for medical services (perceived need) as well as the provider’s professional judgment of the person’s health status (evaluated need). The need factors are often the strongest motivating factors for seeking treatment (Andersen, 1995). Andersen cites that perceived need is more closely tied to adherence to a regimen while evaluated need is more closely related to the type and amount of treatment a person will receive (Andersen, 1995).

The original model has been updated several times since its original inception. In the Phase 4 expanded model, Andersen includes genetic factors under the predisposing characteristics (Andersen, 1995). Additionally, psychological factors were added to the original three sets of characteristics by Bradley, McGraw, Curry, Buckser, King, Kasl, and Andersen in 2002.

The researcher will utilize the Phase 4 expanded Andersen model (Andersen, 1995) but will also utilize the additional psychosocial components conceptualized by Bradley, McGraw, Curry, Buckser, King, Kasl, and Andersen (2002). This framework is relevant to the project as it takes into account the complexity of human behavior and the multiple layers of factors contributing to access and utilization of health care services. Additionally, the framework provides a foundation for identifying gaps in access which will enable the researcher to make recommendations for targeted, effective, and efficient interventions to address barriers to access and utilization of behavioral health services.

Methodology

This project is a mixed methodology study to identify the barriers and facilitators that patients in this primary care practice setting face when obtaining behavioral health services. The researcher completed a retrospective chart review in addition to utilizing a survey and qualitative data. The researcher identified correlations between identified barriers and sociodemographic characteristics and used the study results to formulate an access improvement plan for the AtlantiCare organization.

The researcher accomplished this project in 3 phases. The first phase was a retrospective chart review conducted at the AtlantiCare Primary Care Plus practice in North Cape May, NJ. The purpose of this chart review was to identify patients within the practice that had been identified with a behavioral health diagnosis between January 1, 2017 – January 1, 2018. To accomplish this, the researcher obtained a report from the AtlantiCare Information Technology (AIT) department. Once these patients were identified, the researcher used this report to complete the remainder of the study.

In phase 2, the researcher separated the patients identified through the chart review into 2 lists: those referred to behavioral health services outside of the primary care practice and those who had not been referred. The researcher then contacted by telephone each of the patients who were referred to behavioral health services from the primary care practice to identify barriers and facilitators to engaging in behavioral health services. The researcher utilized the BACE-3 (Clement, et al., 2012) tool (Appendix C) and asked one open-ended question (“Can you think of anything that made the process of connecting with a provider easier?”) of each of the subjects to help identify facilitators to obtaining services.

During this phase, the researcher also interviewed the provider as well as a social worker in the same healthcare organization to identify their perceptions of barriers to referring patients to behavioral health services in the CMC area. This data was used to enrich the researcher's understanding of providers' experience of referring patients. Additionally, it served as a comparison for the researcher to help identify the subjects' experience versus providers' experiences. The researcher utilized the information obtained from the use of the BACE-3 (Clement, et al., 2012) to conduct statistical analysis. The analysis identified correlations between sociodemographic status and barriers in this population. Additionally, the researcher sought out facilitators, both personal and community, to obtaining behavioral health services.

In phase 3, the researcher took the data obtained through statistical analysis and identified the most common barriers in this population. The researcher then reviewed evidence-based interventions that address these barriers and generated an access improvement plan for the AtlantiCare healthcare organization. The purpose of this plan was to assist the AtlantiCare organization in removing barriers to behavioral health services in this population. With improved access to behavioral health services, the researcher anticipates improvement in outcomes over the long term (which will not be studied as part of this project).

The practice setting for this project is a primary care office with two providers (the researcher worked with only one on this project). A clinical lab shares the space with the providers, as well. There are 4 full time employees on-site and an additional sub-contractor that is working on a special genetic bank data collection project AtlantiCare has undertaken. The patient population of 2200 people is varied, primarily Caucasian, with varied ages and socioeconomic backgrounds (C. Vaccaro, personal communication, January 10, 2017). The provider is not a behavioral health specialist however he sees patients with behavioral healthcare needs. The provider cites that he does his best to treat them but cites the need for increased behavioral health access in this area (C. Vaccaro, personal communication, January 10, 2017).

In completing this project, the following areas were addressed [taken from the Rutgers Doctor of Nursing Practice Project toolkit (Rutgers University - School of Nursing, 2016)]:

1. Obtained letters of support from senior leadership at AtlantiCare (including the executive director and Medical Director of AtlantiCare Behavioral Health and the Vice-President of the AtlantiCare Hospital Network)
2. Submitted the project proposal to Rutgers Institutional Review Board (IRB) committee
3. After receiving approval from Rutgers IRB committee, submitted the project proposal to the Nursing Research Council at AtlantiCare
4. Once approved by the Nursing Research Council, submitted the project proposal to the IRB committee at AtlantiCare

Population

The study population included adult patients of the practice ages 18 and over with a behavioral health diagnosis (Appendix D). Sampling was conducted using retrospective chart review. The researcher reviewed and abstracted information from the charts on-site at the AtlantiCare Primary Care Plus practice site in North Cape May, New Jersey. The researcher utilized an electronic medical record software named E-Clinical Works to obtain contact information and medical diagnoses for persons identified in the AIT report. The AIT report included persons who were identified with a behavioral health diagnosis within the previous 12 months. All charts of living adult patients 18 years of age and older were considered. Persons diagnosed with a behavioral health diagnosis including any depressive disorder, anxiety disorder, bipolar disorder, obsessive compulsive disorder, traumatic disorder, dissociative disorder, somatic disorder, eating disorder, neurodevelopmental disorder, neurocognitive disorder, personality disorder, substance use disorder, or psychotic disorder were eligible for inclusion in the study. Exclusion criteria included persons under the age of 18 years old, non-English speaking persons, persons not residing in CMC, New Jersey, and persons with medication-induced disorders.

A master list of eligible study participants (Appendix E) that included a unique client identification code (generated by the researcher), their name, their behavioral health diagnosis, medical diagnosis, contact information, and whether they were referred to behavioral health services from the primary care provider was completed. Prior to initiating phone calls for the qualitative component of the study, the client identification code, available demographics information, and the behavioral health & medical diagnoses were transferred to a data collection sheet (Appendix F) with the study participant's name excluded to allow for de-identification of the data.

Consent

The researcher was granted a waiver of written documentation of consent. For the Rutgers IRB process, the researcher utilized Rutgers IRB Checklist number HRP-411 ("Waiver of Written Documentation of Consent") to formulate the written request for submission to the IRB panel. Oral consent to participate was obtained by the researcher. All components of Section 7 of the Rutgers IRB Worksheet HRP-314 ("Criteria for Approval") were incorporated into the telephone script (Appendix G) the researcher used when conducting telephone interviews. Study participants were also advised that there is no compensation for participation in this study, participation is voluntary, and participation will not cost anything.

Recruitment

The researcher was the only person involved in the research recruitment process. The researcher contacted all eligible participants by telephone using the demographics information provided in the electronic medical record. As the calls were conducted after discovery of the behavioral health diagnosis during the initial chart review, there is no actual recruitment period. The researcher used the telephone script (cited previously) as it included the researcher's identity and affiliation, purpose of the study, duration of the participant's participation, procedures, and contact information for questions or concerns. Additionally, the script informed the participant that their participation was voluntary, there were no repercussions for not participating, and they could discontinue the conversation at any time.

During the phone calls with the research subjects, the researcher sought to determine if there were any barriers or facilitators to the initiation of and retention in behavioral health services. This was accomplished through a qualitative question process in which the researcher explored with the subject their experiences with the referral and initiation process.

Resources Needed

The researcher required access to the electronic medical record and office space in the primary care provider's office. Although the use of office space may have caused an interruption in the provider's workflow, the provider agreed to allow this writer the space in the interest of research and quality improvement. The researcher also utilized the phones in the office and a minimal amount of paper. The office agreed to supply these items in support of the researcher's work at no cost. There was no major monetary investment required for this project.

Benefits and Risks

There was no more than minimal risk of harm to study participants. There was no direct intervention with the participants as the data collected was more qualitative in nature. There was a risk of loss of privacy and confidentiality for the subjects. To mitigate this risk, all documents involving personally identifiable data were password encrypted and maintained on the researcher's computer, which was also password protected. Additionally, there was no need to print documents with client identifying information as it was all maintained in a digital format. A digital copy of the master list of client information will be maintained by the DNP chair.

During data collection with the provider, all interviews occurred in the provider's private office. No other staff were present during the interview process to minimize risk of loss of confidentiality to the study participant. The provider already has a therapeutic relationship with the participants and will have prior knowledge of the participants' behavioral health diagnoses so there is no risk of breach of confidentiality regarding their behavioral health needs.

Timeline

The researcher received Rutgers University IRB approval on October 19, 2017 with the stipulation that IRB approval would need to be received from the organization where the research was being conducted, as well. The researcher engaged with the AtlantiCare Nursing Research Council (NRC) on November 3rd, 2017 and received NRC approval on December 1st, 2017. IRB approval from the study organization was received on February 22nd, 2018. The researcher began work on the project immediately upon approval from the IRB. Chart review and AIT data analysis spanned a two-week period. Data collection occurred over a three week period with telephone calls and provider meetings. Data analysis occurred over a week period with collaboration from a statistician.

While waiting for IRB approval, the researcher began combing the literature to identify evidence-based interventions to address barriers to behavioral health care. The presentation for the AtlantiCare organization was started at this time with the researcher gathering the socioeconomic information and other data about the community.

Once specific barriers were identified, the researcher continued the search for evidence-based interventions to address the barriers and finalized the report for presentation to the AtlantiCare organization. The final paper for the DNP project was written, submitted, revised, and resubmitted over a five week period. The doctoral defense presentation is anticipated to occur on April 13th, 2018.

Budget

The researcher's budget for the project was approximately $1175 (Figure 3). Included in this budget were costs for the project implementation as well as the project presentation to both Rutgers University and the AtlantiCare organization. The researcher incurred all costs.

Project implementation costs included copies ($75) and gifts for the staff of the facility where the project occurred to thank them for their assistance ($250). The report that provides the results and evidence-based suggestions for removing barriers to access to care required ten copies for leadership at a cost of $25 each for a total cost of $250. The final project presentation to Rutgers University will be presented in a hard-bound book of which five copies are needed (at $100 each). Additionally, a poster board is needed for the poster dissemination presentation ($100).

Evaluation Plan

Data Collection Instruments

The researcher utilized several study instruments in the project including the data collection sheet (Appendix F) and the BACE-3 tool (Clement, et al., 2012) (Appendix C). The BACE-3 is a 30-item questionnaire assessing barriers to behavioral healthcare services. The tool utilizes a Likert scale to measure a participant's actual and perceived barriers (range "0" representing "not at all" to "4" representing "a lot"). Barriers are categorized into structural and attitudinal barriers with a subset of questions specifically focused on stigma related barriers. The BACE tool was tested for psychometric validity on 117 individuals with 59 of those participants retaking the test for test-retest validity.

The BACE tool has been tested for test-retest reliability, internal consistency, validity, and acceptability. A majority of the items on the BACE had a weighted kappa value between 0.61-0.80, indicating substantial agreement between test and retest. Cronbach's alpha for the stigma subscale was 0.89 indicating good internal consistency. The scale was compared to two existing validated tests for assessment of validity. Results demonstrated that the BACE exhibits convergent and construct validity. Finally, the Flesch Reading Ease score was 78.8, showing that it is easier to read than other documents available to the general public. Its Flesch-Kincaid Grade Level was indicated that the BACE-3 can be read and understood by the average 11 to 12 year-old (grade level 5.9) (Clement, et al., 2012).

The chart review was conducted utilize the E-Clinical Works software program to identify demographics and contact information for study participants. The researcher used the data collection sheet to collect as much demographic information from the chart as possible.

The researcher utilized the relevant variables spreadsheet (Appendix D) to assist with inclusion of study participants. The participants must have one or more of the diagnoses listed in the relevant variables spreadsheet to be considered for inclusion.

Data Maintenance and Security

To ensure security of the data, data was stored in a password encrypted document on the researcher's computer. The computer is also password protected. The only people who had access to the data were the researcher and the DNP team. The information will be destroyed after the period required by the Rutgers University protocol.

Data Analysis

The researcher obtained the assistance of a professional statistician to conduct the statistical analysis of the data obtained through phases 1 and 2. The researcher assigned nominal data identifiers to the answers for each of the questions on the BACE-3 (Clement, et al., 2012). The researcher and statistician assisting the researcher utilized the SAS (version 9.4) data analysis program to determine correlations between each of the socio-demographic characteristics and the answers on the BACE-3 tool. The data was assessed for statistical significance. The researcher was looking for a statistical significance of 0.05 (alpha level). The researcher attempted to obtain as large a sample population as possible to increase the power of the test and was looking for a 95% confidence interval.

The researcher and statistician determined that the sample size was not large enough to perform Chi Square Tests of Association when factors had more than two categories, because expected cell frequencies were often less than five (and frequencies less than five invalidate results of the Chi Square). Furthermore, the Chi Square Tests of Association do not take into account the ordinal properties of the Likert scale (thereby sacrificing statistical power to detect differences). Therefore, testing for differences in barriers related to socio-demographic characteristics was conducted with the Wilcoxen Rank Sum test, which *does* consider the ordinal nature of the Likert scale responses. Additionally, prior to testing for differences, factors with more than two categories were transformed into two-category factors by merging categories. For example, marital status with four categories (Divorced/Separated, Married, Single, Widowed) was transformed to Marital status with two categories (Married, Not Married). Employment's three categories (Full time, Part time/Seasonal, Retired/Disabled/Unemployed) were merged into two categories (Working, Not Working). The continuous variable Age was used to form an Age variable with two categories (55 and Under, Over 55).

Each of the binary socio-demographic factors was tested to see if differences exist with regard to BACE-3 barriers. A Wilcoxon Rank-Sum Test (exact 2-way) was performed for each factor and on each BACE-3 item to determine if differences in perceived barriers exist between Genders, Age levels, Marital Status, Education level, and Employment level. The Wilcoxon Rank-Sum Test is a non-parametric test (i.e., does not assume a normal or a continuous distribution) and is therefore appropriate for analyzing Likert scale responses. One trade-off however, is that the Wilcoxen Rank-Sum test has a lower ability (as compared to a parametric test) to detect a difference when one truly exists. Although this is a very conservative approach, the researcher and statistician agreed that the results would have increased validity when performed in this manner.

In cases where the socio-demographic variable was continuous (i.e., Age) or had a natural hierarchical order (i.e., Education), the Spearman Rank correlation test was performed in addition to the Wilcoxen Rank-Sum. Spearman Rank correlation is used to test the association between two ranked variables, or one ranked variable and one measurement variable.

Additionally, qualitative analysis related to facilitators was conducted and identified facilitators were categorized according to their frequency observed during the telephone interviews. Qualitative data was analyzed to look for patterns in responses.

After completion of the analyses, the researcher used the data from phases 1 and 2 to formulate a presentation with evidence-based recommendations. This report was presented to the leadership at AtlantiCare Health Systems and AtlantiCare Behavioral Health.

Results

The report received from AIT identified 57 potential study participants. Of those 57, the researcher was unable to engage seventeen (29.8%) of those identified. The researcher called nine people on two separate occasions and left messages but received no response. Five asked the researcher to call back but did not respond when the researcher called at the specified time. One person identified was not a patient at this primary care office, one had an incorrect number in the chart, while another was personally known to the researcher and was excluded due to the potential for bias in the responses.

Thirteen potential participants (22.8%) chose not to participate in the research. Seven said their symptoms had improved and no longer needed services, one stated that they “didn’t actually have” a behavioral health diagnosis, one cited a cognitive impairment that prohibited them from participating, and four gave no specific reason for choosing not to participate.

The researcher was able to engage and interview 27 study participants (a 47.4% participation rate). Table 1 shows the distribution of study participants by socio-demographic characteristic and the derivation of the two-category factors:

Table 1

Socio-Demographic Characteristics of Study Participants (n=27)

Variable	Category	n	%
GENDER	Male	2	7.4
	Female	25	92.6
AGE	Continuous Variable	Mean = 56.7	Std Dev = 17.7
AGE_2	55 and under	12	44.4%
	over 55	15	55.6%
MARITAL_STAT	Divorced/Separated	7	25.9%
	Married	13	48.1%
	Single	2	7.4%
	Widowed	5	18.5%
MARITAL_STAT_2	Married	13	48.1%
	Not Married	14	51.9%
EDUCATION	Bachelor/Graduate degree	9	33.3%
	Less than HS/HS graduate	7	25.9%
	Some College/Associate degree	11	40.7%
EDUCATION_2	High School or Less	7	18.5%
	College	20	81.5%
EMPLOYMENT	Full time	11	40.7%
	Part time/Seasonal	2	7.4%
	Retired/Disabled/Unemployed	14	51.9%
EMPLOYMENT_2	Employed	13	48.1%
	Not Working	14	51.9%

Barriers

Statistical analysis reveals that there were several statistically significant factors identified through this research. Unmarried persons (Wilcoxen Rank Sum *p* = 0.03) and older adults (Wilcoxon Rank Sum *p* = 0.02) were more likely to perceive problems with transportation or travelling to appointments as a barrier. Men are more likely than women to identify a preference for alternative forms of care (Wilcoxen Rank Sum *p* = 0.04) and not wanting a behavioral health problem in their medical record (Wilcoxen Rank Sum *p* = 0.04) as barriers. Younger individuals who participated in the study also identified not wanting a behavioral health problem in their medical record as a barrier (Spearman *p* = 0.04) in addition to difficulty taking time off from work (Spearman *p* = 0.04). The analysis also revealed that persons with a lower level of education were more like than those with a Bachelor or Graduate degree to identify a fear of being put in the hospital against their will (Spearman *p* = 0.05) as a barrier to engaging in behavioral health services. Table 2 below lists a summary of the *statistically significant* findings:

Table 2

-Summary of Statistically Significant Findings

Socio-demographic Factor	**Breakdown of socio-demographic factor**	**BACE Item**	**Barrier**	**Barrier Type**	**Wilcoxen Rank Sum Exact Test P-Value**	**Spearman P-Value**	**Comments**
Marital Status	Married or not married	BACE3_6	Problems with transport or travelling to appointments	Structure	0.03	N/A	Unmarried people are more likely to perceive as barrier
Gender	Male or female	BACE3_10	Preferring alternative forms of care (holistic or spiritual care)	Attitude	0.04	N/A	Males are more likely to perceive as barrier
		BACE3_21	Not wanting a mental health problem to be on my medical records	Stigma	0.04	N/A	Males are more likely to perceive as barrier
AGE	Under 55 or 55 and over	BACE3_6	Problems with transport or travelling to appointments	Structure	0.02	0.00	People aged 55 and over are more likely to perceive as barrier
		BACE3_21	Not wanting a mental health problem to be on my medical records	Stigma	not significant	0.04	People aged under 55 were more likely to perceive as barrier
		BACE3_27	Difficulty taking time off work	Structure	not significant	0.04	People aged under 55 were more likely to perceive as barrier
Education	High school education or less or college educated	BACE3_4	Fear of being put in hospital against my will	Attitude	not significant	0.05	Persons with a high school degree or less were more like to perceive as a barrier

Table 3 below shows the rank of each BACE item with regard to the proportion of participants listing the item as a major barrier (i.e., “a lot”). The #1 ranking BACE item is BACE3_2 “Wanting to solve the problem on my own”, with 40.7% of respondents indicating it as a major barrier. BACE3_28 “Concern about what people at work might think, say or do” was ranked 2nd. BACE3_3 “Concern that I might be seen as weak for having a mental health problem” was ranked as 3rd. Of the top 12 ranked BACE-3 items, ten were attitudinal (with six of those specifically related to stigma) and two were structural.

Table 3

Mean Scores, Frequencies and Ranks for Barriers

BACE Item	**Barrier**	**Barrier Type**	**Mean**	**Standard Deviation**	**% Reporting No Barrier ('not at all')**	**% Reporting Any Barrier ('a little', 'quite a lot', 'a lot')**	**% Reporting Major Barrier (‘a lot’)**	**Rank (Proportion Reporting Major Barrier)**
BACE3_1	Being unsure where to go to get professional care	Structure	0.44	0.70	66.7%	33.3%	11.1%	15
BACE3_2	Wanting to solve the problem on my own	Attitude	1.26	1.13	33.3%	66.7%	40.7%	1
BACE3_3	Concern that I might be seen as weak for having a mental health problem	Stigma	0.93	1.24	59.3%	40.7%	33.3%	3
BACE3_4	Fear of being put in hospital against my will	Attitude	0.41	0.64	66.7%	33.3%	7.4%	19
BACE3_5	Concern that it might harm my chances when applying for jobs (n=16)	Stigma	0.38	0.81	75.0%	25.0%	6.3%	23
BACE3_6	Problems with transport or travelling to appointments	Structure	0.70	1.03	63.0%	37.0%	25.9%	7
BACE3_7	Thinking the problem would get better by itself	Attitude	0.81	0.92	44.4%	55.6%	18.5%	8

Table 3

Mean Scores, Frequencies and Ranks for Barriers

BACE Item	Barrier	Barrier Type	Mean	Standard Deviation	% Reporting No Barrier ('not at all')	% Reporting Any Barrier ('a little', 'quite a lot', 'a lot')	% Reporting Major Barrier (‘a lot’)	Rank (Proportion Reporting Major Barrier)
BACE3_8	Concern about what my family might think, say, do or feel	Stigma	0.56	0.97	70.4%	29.6%	18.5%	8
BACE3_9	Feeing embarrassed or ashamed	Stigma	0.89	1.12	48.1%	51.9%	18.5%	8
BACE3_10	Preferring alternative forms of care	Attitude	0.33	0.73	77.8%	22.2%	7.4%	19
BACE3_11	Not being able to afford the financial costs involved	Structure	0.89	1.15	55.6%	44.4%	29.6%	4
BACE3_12	Concern that I might be seen as ‘crazy’	Stigma	0.74	0.98	59.3%	40.7%	29.6%	4
BACE3_13	Thinking that professional care probably would not help	Attitude	0.59	0.89	63.0%	37.0%	18.5%	8
BACE3_14	Concern that I might be seen as a bad parent (n = 12)	Stigma	0.33	0.65	75.0%	25.0%	8.3%	18
BACE3_15	Professionals from my own ethnic or cultural group not being available	Structure	0.00	0.00	100.0%	0.0%	0.0%	27
BACE3_16	Being too unwell to ask for help	Structure	0.04	0.19	96.3%	3.7%	0.0%	27
BACE3_17	Concern that people I know might find out	Stigma	0.56	0.97	70.4%	29.6%	18.5%	8
BACE3_18	Dislike of talking about my feelings, emotions or thoughts	Attitude	0.67	0.73	48.1%	51.9%	14.8%	13
BACE3_19	Concern that people might not take me seriously if they found out I was having professional care	Stigma	0.41	0.80	74.1%	25.9%	11.1%	15

Table 3

Mean Scores, Frequencies and Ranks for Barriers

BACE Item	Barrier	Barrier Type	Mean	Standard Deviation	% Reporting No Barrier ('not at all')	% Reporting Any Barrier ('a little', 'quite a lot', 'a lot')	% Reporting Major Barrier (‘a lot’)	Rank (Proportion Reporting Major Barrier)
BACE3_20	Concerns about the treatments available (e.g. medication side effects)	Attitude	1.07	1.07	37.0%	63.0%	29.6%	4
BACE3_21	Not wanting a mental health problem to be on my medical records	Stigma	0.26	0.53	77.8%	22.2%	3.7%	24
BACE3_22	Having had previous bad experiences with professional care for mental health	Attitude	0.59	1.08	70.4%	29.6%	14.8%	13
BACE3_23	Preferring to get help from family or friends	Attitude	0.26	0.66	81.5%	18.5%	3.7%	24
BACE3_24	Concern that my children may be taken into care or that I may lose access or custody (n = 12)	Stigma	0.00	0.00	100.0%	0.0%	0.0%	27
BACE3_25	Thinking I did not have a problem	Attitude	0.19	0.68	92.6%	7.4%	7.4%	19
BACE3_26	Concern about what my friends might think or say	Stigma	0.37	0.74	74.1%	25.9%	7.4%	19
BACE3_27	Difficulty taking time off work	Structure	0.74	0.94	48.1%	51.9%	11.1%	15
BACE3_28	Concern about what people at work might think, say or do (n=17)	Stigma	1.12	1.17	41.2%	58.8%	35.3%	2
BACE3_29	Having problems with childcare while I receive professional care (n = 12)	Structure	0.00	0.00	100.0%	0.0%	0.0%	27

Table 3

Mean Scores, Frequencies and Ranks for Barriers

BACE Item	Barrier	Barrier Type	Mean	Standard Deviation	% Reporting No Barrier ('not at all')	% Reporting Any Barrier ('a little', 'quite a lot', 'a lot')	% Reporting Major Barrier (‘a lot’)	Rank (Proportion Reporting Major Barrier)
BACE3_30	Having no one who could help me get professional care	Structure	0.15	0.46	88.9%	11.1%	3.7%	24

Outside of the barriers identified by the BACE-3, the researcher identified several other barriers that clients in this population were experiencing. While a participant may not have answered the questions on the BACE-3 affirmatively, they openly shared the impact of these additional barriers with the researcher.

The poor quality of care received from the main behavioral health care provider in this community was cited by 48% of participants (n=27). Structural barriers including the long distance to drive to get to a preferred provider (n=5), the lack of providers accepting insurance plans (n=3), and their symptoms of physical or behavioral health disorders (n=2) were also identified.

Although not perceived as a barrier by the participants, ten participants mentioned how well the provider in this practice manages their symptoms. While they experienced additional barriers during their search for behavioral health care services, all ten persons noted that the fact that they were so well managed by the primary care physician that they didn’t really feel a need to be seen by any other provider. A common theme that emerged among these participants was that, since they were “in good hands”, as one participant stated, they didn’t see the barriers as significant and were quick to allow the barriers they faced to deter them from further seeking services. While the researcher theorized that the provider's care could be categorized as a barrier, all ten participants cited the support from the provider as a *facilitator* to engagement in behavioral health care.

Additionally, the researcher should note that of the thirteen people who declined to participate because they were not actively seeking behavioral healthcare services, seven cited improved symptomology resulting in a lack of need for services as the reason. Five of those seven people specifically mentioned the provider's prescribing of their medications as their reason for not seeking further services.

Facilitators

The researcher asked each person interviewed one open-ended question, "Can you think of anything that made the process of connecting with a provider easier?" While each person had a unique experience with connecting to behavioral health services, common themes emerged. Eleven study participants cited two or more facilitators while five could not identify one facilitator.

Ten participants identified the support of the provider in this practice as being a primary facilitator to engaging in behavioral health services. Support from family and friends was cited by eight participants as making their connection to behavioral health services easier. Four others cited the support of professionals (such as a counselor or spiritual advisor), three cited education, and two cited the use of coping strategies as facilitators. Additionally, one person cited their "own fortitude", another cited a positive outlook on life, while a third noted their spirituality as facilitators.

Limitations in Data Collection

The researcher identified several limitations with the data obtained from AIT and within the demographics of the study population. The report identified 57 people with behavioral health diagnoses in the practice setting. The provider, based on his experience with his population, was certain that there were more than those identified in the report. The provider, using a different report that identifies persons in the practice with a Patient Health Questionnaire-9 (PHQ-9) (Kroenke, Spitzer, & Williams, 2001) score of five or greater, identified an additional 69 individuals not included in the researcher's report. A score of five or greater on the PHQ-9 is an indication of clinical depression in a test subject. As this data was not included in the initial report received from AIT, the researcher was unable to access the information. This resulted in a small sample that may not be truly representative of the demographics of the practice population.

AIT later reported to the researcher that they searched diagnosis code *descriptions* versus the actual ICD-10 codes. The report that was generated was based on the following diagnosis code descriptions: "Anxiety disorder, Bipolar disorder, Depressive disorder, Obsessive compulsive disorder, Trauma disorder, Dissociative disorder, Eating disorder, Neurocognitive disorder, Personality disorder, Substance Use disorder, and Psychotic disorder". Because of this limitation, further research will need to be conducted to obtain an accurate prevalence rate and statistical analysis of barriers.

Limitations were also noted in participant demographics. First, there was limited participation in the study by the male gender. Although cited as a limitation, it should be noted that the conservative nature of the statistical analysis (using an exact test versus to enhance validity) led to relevant data nonetheless. Additionally, the insurance status of the participants is a limitation. All study participants in this research were insured with either private insurance or

Medicare. Further research should be completed to include persons who are uninsured or who have state funded Medicaid insurance plans to assess barriers.

Discussion

This study served as the researcher’s DNP project. The researcher expected the data collection phase to take considerably longer due to the anticipated number of patients with behavioral health disorders. As cited in the limitations, the report the researcher received was incomplete, resulting in a small sample size. However, the small sample size allowed the researcher to obtain more qualitative data during the telephone interviews. The researcher initially intended to spend no more than twenty minutes on the phone with each study participant. The researcher noted, however, that most people (even those who chose not to participate) wanted to “tell their story”.

The researcher spent an average of 6.4 minutes on the phone with each person who chose not to engage in the research, with the longest call lasting seventeen minutes. As previously mentioned, seven people reported that their symptoms were better, and they no longer needed services. The five people who reported improved symptoms because of the care they received from the provider spent the most time on the phone with the researcher. These patients wanted to ensure that the researcher was aware of the quality of care received from the provider. They also wanted the researcher to know that they had no intention of attempting to engage in behavioral healthcare services in CMC. The researcher spent a significant amount of time on the phone with one person who stated, “I’m getting old and I just don’t care anymore”. This gentleman then proceeded to tell the researcher about how he developed his “I don’t care” attitude and the perceived positive impact this has had on mental health.

The researcher spent an average of 31.6 minutes on the phone with each of the 27 study participants with the longest call lasting 48 minutes. Statistically significant correlations were identified in all demographic categories except employment status. Single people and persons over age 55 were more likely to identify problems with transportation or travelling to appointments as a barrier. While there is fare free transportation available, several of the participants identified that the schedules are difficult to manage. Additionally, they are often very early or late for appointments and wait for up to several hours for their transportation home. This process could prove to be arduous for an individual without a behavioral health disorder but the added anxiety that often accompanies this stress has been reported as “too much to bear” by one participant.

Men and persons under the age of 55 identified not wanting a behavioral health disorder on their record as a barrier. Important information to consider is that the city of Cape May is home to one of only three U.S. Coast Guard Training Centers in the entire country. Many men and women in the CMC area are either enlisted in the Coast Guard or work on the Coast Guard base. While there were previously policies in place that prohibited persons with certain identified behavioral health disorders from engaging in activities involving weapons, some of those restrictions have been eased. Regardless of the current policies for the U.S. Coast Guard, it would be worth further exploring how many of the individuals identifying this barrier are involved in military service, particularly here in the CMC area, to determine if military connections correlate to this barrier.

In addition to the concern of having a behavioral health diagnosis on their record, persons under the age of 55 were likely to report difficulty taking time off of work. In light of the fact that a majority of persons over the age of 55 in this study identified that they were either retired or disabled, this is an anticipated result. What the researcher did not anticipate was the fact that more men cited wanting to seek alternative forms of care than women. Given the fact that men were less likely to engage in the research, this could be an anomaly. Further research in this area should be conducted.

The research also identified correlations with level of education and the fear of being placed in the hospital against one's will. It was discovered that participants with less than a Bachelor degree were more likely to identify this as a barrier than those with a Bachelor degree or higher. This was not only an identified attitudinal barrier, but also an opportunity for education from the providers. In the researcher's conversations, it was noted that participants with behavioral health disorders and a lower educational level often misunderstood their rights as a patient under current legislation. The participants shared about times when someone they know had experienced an involuntary hospital admission and the impact that this had on them. While the researcher was careful to not taint the data by providing feedback, the researcher also heard an opportunity for an educational intervention to help address this barrier.

Research participants cited many barriers not addressed by the BACE-3. The most prevalent barriers identified (outside of the BACE-3 questions) were the quality of behavioral health care in this community closely followed by the distance participants needed to drive to obtain what they considered "quality" services. As a result, many participants chose not to engage in behavioral health services outside of the primary care provider's office.

Many study participants mentioned to the researcher that they have been dissatisfied with the quality of care received from the main behavioral health provider in the CMC area. In addition to long wait times, study participants reported being displeased with how they were treated by providers citing that they felt "dismissed", "misunderstood", and "unimportant". As a result, many sought behavioral health services outside of the CMC area, resulting in long drive times (up to an hour in some cases). While they stated they had no an issue actually *getting* to the appointments (they had reliable transportation, were insured, had money for copays, and were able to take the time off of work that they needed), the long drive was an inconvenience that took time away from family and social activities, often increasing stress and exacerbating symptoms.

During the course of the research data collection, the researcher was also able to engage a social worker that worked in this population. She had many insights into barriers that she, as a professional, faced trying to get clients connected with behavioral health care. Although many of her statements mirrored those of the study population (lack of available services, long wait times for appointments, and long drive times for services), she noted several additional barriers that are worth mentioning.

First, she cited, there are no services in the area for clients with eating disorders. She refers clients with eating disorders to services in organizations that are between one and three hours away. Additionally, she notes, clients with eating disorders often feel stigmatized when they attempt to engage in treatment with behavioral health providers. They are frequently told “sorry, but we can’t treat you because you have an eating disorder.” (R. Cresse, personal communication, March 14, 2018)

Second, she notes, is the lack of medication management services. She mentions that the one main provider of medication management services in the area is no longer accepting new clients as they have a full patient panel. She notes that patients often turn to their PCP for medication management services. Many PCPs are not equipped to manage behavioral health disorders and often prescribe medications but fail to provide education about these medications. As a result, mental health medical literacy is low among her patient panel. Many clients don’t know the indication, effects, or priority side effects of their psychotropic medications (R. Cresse, personal communication, March 14, 2018).

Finally, this social worker cites the significant amount of stigma in the community. The combination of low mental health literacy and stigma lead many, she says, to just “try to deal with (their behavioral health issues)” (R. Cresse, personal communication, March 14, 2018). She has observed that many of her clients would prefer to live with an untreated behavioral health disorder than to participate in services with the main behavioral health care provider in this community. Additionally, they fear that the stigma attached to behavioral health disorders could limit the work they can do in the community and “ruin their reputation” (R. Cresse, personal communication, March 14, 2018).

The researcher’s interview with the provider identified several additional barriers that he has experienced in the clinical setting. The provider cites his own lack of specialized education in behavioral health disorders as a barrier for him. Although he, by patient report, is extremely effective at managing behavioral health disorders in this setting, he asserts that his experience has been “trial by fire” (C. Vaccaro, personal communication, March 16, 2018). He has spent a significant amount of his personal time researching and talking to behavioral health care providers (this researcher included) to come to an understanding of how to properly address and effectively manage crisis situations and other behavioral health issues. While he asserts that he is happy with his job, he states that he feels unprepared and unsupported at times (C. Vaccaro, personal communication, March 16, 2018).

The provider also cites a lack of coordination between medical and behavioral health care for those engaged in behavioral health care services. He notes that requests for behavioral health records often go unanswered by the behavioral health provider. This lack of coordination not only places the client at risk but imposes an increased risk on the provider. This forces the client to become the “go-between” with the behavioral health provider. The provider cites that this is unfair to the client and may put additional strain on the client, leading to frustration and increasing symptoms.

Additionally, the provider cites the significant amount of time involved in assessing, diagnosing, and stabilizing clients with behavioral health disorders as a barrier to referring them to behavioral health treatment. Referring behavioral health clients to services places a large strain on practice productivity, as well, as there are very few resources with long wait times to obtain an appointment. In addition to increased time demands with coordination of care, he cites ED follow-up, phone calls, and other supportive interventions as adding to the strain. There is also an added amount of responsibility on the local ED. Clients with somatic complaints often present to the ED seeking answers that the ED staff are not properly equipped to provide. Dr. Vaccaro mentions that many clients, in particular those with anxiety disorders, have a difficult time accepting that their symptoms are somatic and continue to seek out medical attention from multiple providers. As a result, he asserts that treating clients with behavioral health disorders “takes a lot of time and energy to manage and treat”

Implications for Clinical Practice

The research identified several significant barriers in this population, both structural and attitudinal. Attitudinal barriers, including stigma, are prevalent in this population, as with many individuals with a behavioral health disorder. Of all the study participants surveyed, 40.7% identified wanting to solve the problem on their own as a major barrier while concern over what people at work think and concern of being seen as weak ranked as major barriers for 35.3% and 33.3% of the study population respectively. Additionally, qualitative analysis reveals structural barriers, including the distance required to travel to receive “quality” care, as a major barrier.

The data obtained from this study demonstrates a need for better preparation of primary care clinicians to address barriers. The move to incorporate behavioral health care services into primary care is one that serves to address structural and attitudinal barriers in addition to reducing costs. For those practices not currently using integrated care models, there must be increased coordination of care with other community behavioral health care organizations. In the CMC area, the sparse availability of behavioral health care services makes this coordination even more difficult. Regardless of the lack of coordination, staff working in the primary care setting should be educated and supported in addressing behavioral health disorders *before* they can effectively assist patients with these issues. Once providers and staff feel confident and prepared, they can assist clients with addressing and/or removing the barriers to engagement in behavioral health services through education, advocation, and supportive interventions.

Implications for Healthcare Policy

Advanced practice registered nurses (APRNs) in the state of New Jersey are still not practicing to the fullest extent of their education. In 2016, Adino J. Barbarito, a Juris Doctorate candidate at Seton Hall University School of Law, produced a scholarly paper citing required legislative actions to permit APRNs to practice to the fullest extent of their training. He cites a 2011 IOM Report that recommended that legislators should “(uncouple) APRNs from physician oversight of their practice” (Barbarito, 2016, p. 2). The author states that professional organizations representing doctors have fought repeatedly in the legislative arena to block nurse practitioners from being able to practice fully and that it is primarily medical doctors who hold positions on state boards that regulate scope of practice. Barbarito notes that this creates a significant conflict of interest for legislators and should be reconsidered to protect the interests of the people of the state versus special interest groups (Barbarito, 2016). Expanding the scope of practice for APRNs will help improve access to care. As a result, patients could see shorter wait times and more choices regarding where they receive their behavioral health care leading to a reduction in barriers.

Concern over losing health insurance was cited as a barrier by some of the study participants. Although this is a long-standing battle in both the U.S. Senate and the House, healthcare coverage as a national priority still seems a distance away. The Legatum Institute, a London based research institute, conducts a prosperity index annually and ranked the U.S. 30th in the world for health (The Legatum Institute, 2017). The health index ranking is based on three factors – basic physical and mental health, health infrastructure, and preventive care. In order to help raise the U.S.'s standing in the world market, the U.S. government must make healthcare a priority. While this document is not an appropriate platform for advocating one type of health insurance model over another, the researcher feels strongly that the need for forward progress in this area is a critical component in addressing structural barriers experienced by the population studied.

Implications for Quality/Safety

One of the main factors impacting behavioral health engagement and retention identified by the study participants is accessibility of quality care. Encouraging behavioral health care providers and organizations to provide services in the CMC area would serve to create competition within the health care market, decrease wait times for appointments, and increase satisfaction of those who receive services. This would essentially serve to address many of the structural and attitudinal barriers study participants cited.

Staff turnover in behavioral health care was also cited as a barrier to engagement in behavioral health services. Study participants reported that high staff turnover impacts the quality of care that they received and resulted in additional stress. One client reported "I don't go back anymore (to therapy) because I'm tired of having to repeat my story all over again." While this is not entirely within the control of the healthcare organization, each organization should evaluate their employee engagement and determine if, and why, they have a high turnover rate. If employee turnover is identified as an issue within an organization, leadership should then determine the impact on customer satisfaction.

While patients repeatedly report that the provider in this office is effectively managing their behavioral health disorder, the provider (as previously mentioned) feels unsupported at times (C. Vaccaro, personal communication, March 16, 2018). Evidence that supports integrated care practices is plentiful and many practitioners report increased satisfaction in the integrated care models (American Psychiatric Association, 2016; American Psychiatric Association [APA] & Academy of of Psychosomatic Medicine [APM], 2016; SAMHSA-HRSA Center for Integrated Health Solutions, n.d.). If full integration is not an option, coordination of care between the primary care provider and a behavioral health specialist that can provide education and support should be a top priority for any healthcare organization working to increase access to behavioral health services in the community.

Implications for Education

Two very important educational areas were noted by the researcher. In total, fifteen people (both participants and non-participants) identified that their behavioral health disorder was being effectively managed by their primary care provider. These individuals endorsed a low perceived need for further treatment of their disorders. The medical and behavioral health communities must continue to provide ongoing education surrounding behavioral health disorders and encourage clients to engage in the full spectrum of behavioral health services (group or individual psychotherapy, family therapy, etc), not just medication management. A lack of a holistic approach to behavioral health care has been shown to decrease quality of life and worsen outcomes (Svavarsdottir, Lindqvist, & Juliusdottir, 2014).

As noted in the findings, as well, is education as a facilitator to engagement in behavioral health care services. Two study participants cited their own research about their behavioral health diagnosis as contributing to their access to services while one cited formal education. The clinicians involved in client care have educational materials readily available through professional websites and, in this facility, the organization’s intranet. These resources could be used to effectively educate patients about their behavioral health disorders and enhance the patient’s experience with behavioral health engagement.

Provider education should be evaluated, as well. Medical schools should consider increasing the amount of behavioral health education they provide to general practitioners and specialists outside of the behavioral health field. With the emergence of new practice and reimbursement models, many non-behavioral health practitioners are seeing behavioral health issues in practice and, as Dr. Vaccaro has expressed, they feel unprepared for the task at hand.

Plans for Future Scholarship

In light of the limitations discovered during the implementation of this study, research should be continued in this population to obtain an accurate prevalence rate and statistical analysis of the barriers. Additionally, further exploration of the qualitative patient self-reported barriers and facilitators to engagement and retention in behavioral health services would be beneficial in gaining a full understanding of the patient’s experience.

For healthcare organizations that have not fully integrated behavioral health care services into their primary care practices, a deeper understanding of the provider's perception of barriers would also be beneficial. Listening to the provider's experiences in delivering behavioral health care services to their patient panel and implementing supports based on their experience could potentially help enhance employee engagement and retention and improve provider satisfaction.

Conclusion

Untreated mental illness has been shown to increase healthcare costs, shorten lifespan, and decrease quality of life for those affected. This research project identified several barriers to access to care in the CMC area. The evidence presented here will be used as a foundation for future research in this demographic area. The amount of qualitative data discovered during the data collection stage will help add to the knowledge base of the leadership of the AtlantiCare organization. This is a population in need of increased access to high quality behavioral health care services closer to home. Additionally, the population and staff need support and education to remove the attitudinal and structural barriers identified during the research. Interventions to address these issues will lead to an improved experience for the client which could, in turn, increase quality of life.

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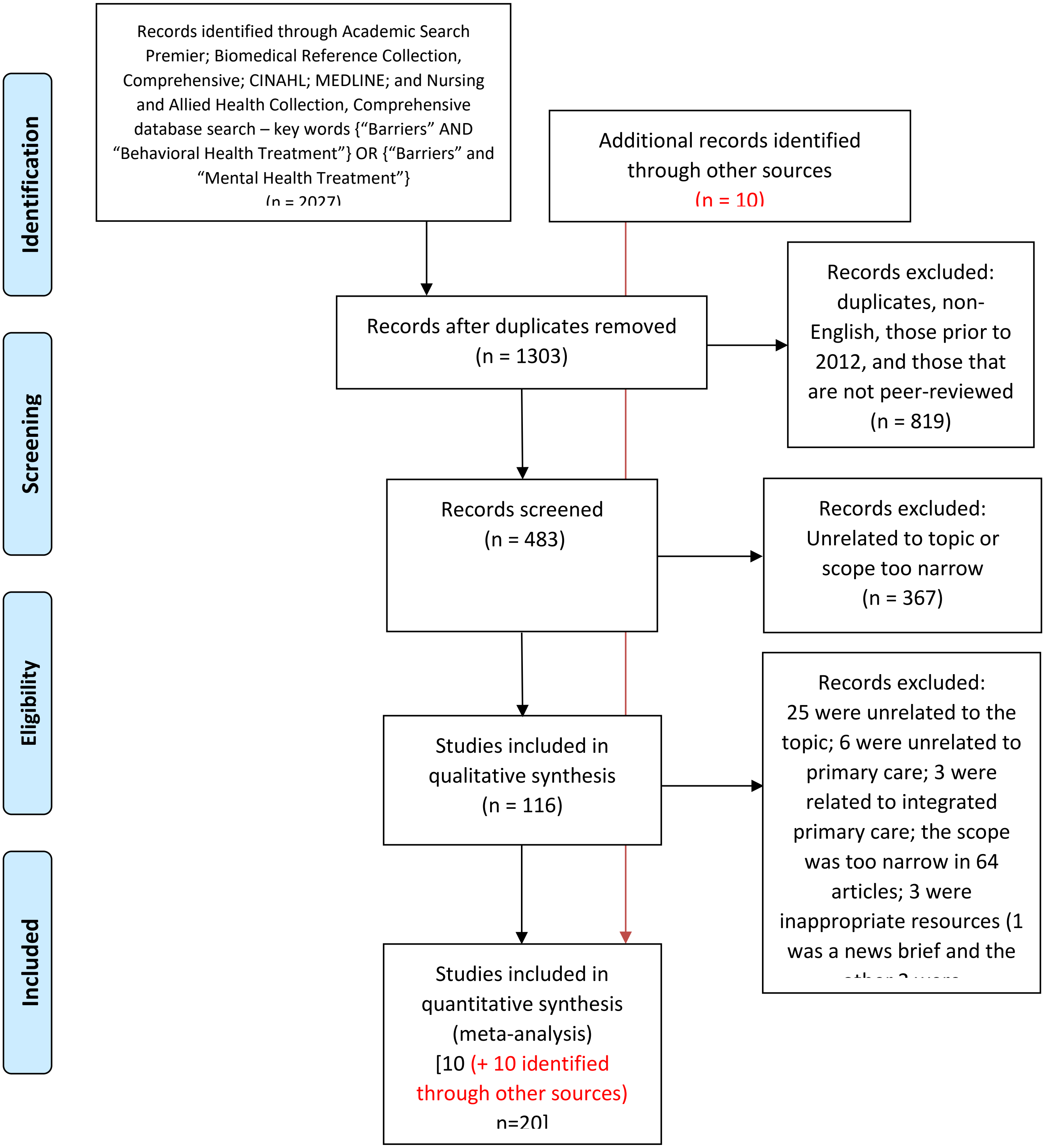
Appendix A: Abbreviations and acronyms

AIT:	AtlantiCare Information Technology
APA:	American Psychiatric Association
API:	Asians and Pacific Islanders
APM:	Academy of Psychosomatic Medicine
APRN:	Advanced Practice Registered Nurse
BACE-3:	Barriers to Access to Care Evaluation – 3rd edition
CMC:	Cape May County
DMHAS:	Division of Mental Health and Addiction Services
DNP:	Doctor of Nursing Practice
DSM-5:	Diagnostic and Statistical Manual – Fifth edition
ED:	Emergency Department
IRB:	Institutional Review Board
MDD:	Major depressive disorder
MI:	Mental illness
NHW:	Non-Hispanic Whites
PCP:	Primary care provider
PHQ-9:	Patient Health Questionnaire – 9
SWOT:	Strengths, weaknesses, opportunities, and threats
UN:	United Nations
U.S.:	United States
WHO:	World Health Organization

Appendix B: PRISMA 2009 Flow Diagram for literature search



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Appendix C: BACE-3

Barriers to Access to Care Evaluation BACE-3

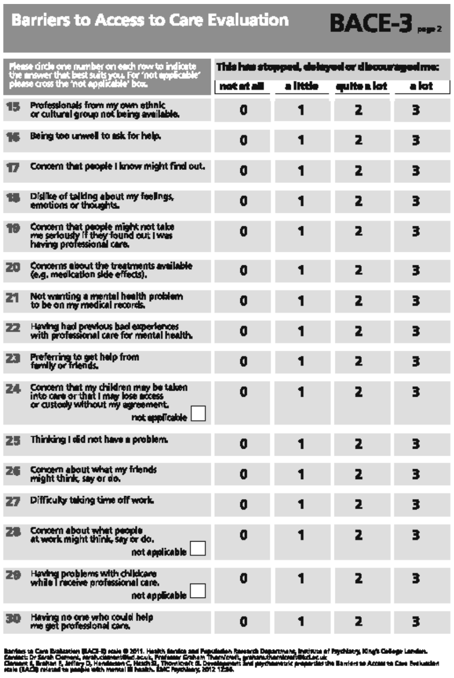
Instructions:
Below you can see a list of things which can stop, delay or discourage people from getting professional care for a mental health problem, or continuing to get help.

By professional care, we mean care from staff such as a GP (family doctor), member of a community mental health team (e.g. care coordinator, mental health nurse or mental health social worker), psychiatrist, counsellor, psychologist or psychotherapist.

Have any of these issues ever stopped, delayed or discouraged you from getting, or continuing with, professional care for a mental health problem?

Please circle one number on each row to indicate the answer that best suits you. For 'not applicable' please cross the 'not applicable' box.		**This has stopped, delayed or discouraged me:**			
		not at all	**a little**	**quite a lot**	**a lot**
1	Being unsure where to go to get professional care.	0	1	2	3
2	Wanting to solve the problem on my own.	0	1	2	3
3	Concern that I might be seen as weak for having a mental health problem.	0	1	2	3
4	Fear of being put in hospital against my will.	0	1	2	3
5	Concern that it might harm my chances when applying for jobs. not applicable ☐	0	1	2	3
6	Problems with transport or travelling to appointments.	0	1	2	3
7	Thinking the problem would get better by itself.	0	1	2	3
8	Concern about what my family might think, say, do or feel.	0	1	2	3
9	Feeling embarrassed or ashamed.	0	1	2	3
10	Preferring to get alternative forms of care (e.g. traditional/religious healing or alternative/complementary therapies).	0	1	2	3
11	Not being able to afford the financial costs involved.	0	1	2	3
12	Concern that I might be seen as 'crazy'.	0	1	2	3
13	Thinking that professional care probably would not help.	0	1	2	3
14	Concern that I might be seen as a bad parent. not applicable ☐	0	1	2	3

Barriers to Care Evaluation (BACE-3) scale © 2011. Health Service and Population Research Department, Institute of Psychiatry, King's College London.
Contact: Dr Sarah Clement, sarah.clement@kcl.ac.uk, Professor Graham Thornicroft, graham.thornicroft@kcl.ac.uk
Clement S, Brohan E, Jeffery D, Henderson C, Hatch SL, Thornicroft G. Development and psychometric properties the Barriers to Access to Care Evaluation scale (BACE) related to people with mental ill health. BMC Psychiatry, 2012 12:36.



Barriers to Access to Care Evaluation BACE-3 page 2

Please circle one number on each row to indicate the answer that best suits you. For 'not applicable' please cross the 'not applicable' box.		**This has stopped, delayed or discouraged me:**			
		not at all	**a little**	**quite a lot**	**a lot**
15	Professionals from my own ethnic or cultural group not being available.	0	1	2	3
16	Being too unwell to ask for help.	0	1	2	3
17	Concern that people I know might find out.	0	1	2	3
18	Dislike of talking about my feelings, emotions or thoughts.	0	1	2	3
19	Concern that people might not take me seriously if they found out I was having professional care.	0	1	2	3
20	Concerns about the treatments available (e.g. medication side effects).	0	1	2	3
21	Not wanting a mental health problem to be on my medical records.	0	1	2	3
22	Having had previous bad experiences with professional care for mental health.	0	1	2	3
23	Preferring to get help from family or friends.	0	1	2	3
24	Concern that my children may be taken into care or that I may lose access or custody without my agreement. not applicable ☐	0	1	2	3
25	Thinking I did not have a problem.	0	1	2	3
26	Concern about what my friends might think, say or do.	0	1	2	3
27	Difficulty taking time off work.	0	1	2	3
28	Concern about what people at work might think, say or do. not applicable ☐	0	1	2	3
29	Having problems with childcare while I receive professional care. not applicable ☐	0	1	2	3
30	Having no one who could help me get professional care.	0	1	2	3

Barriers to Care Evaluation (BACE-3) scale © 2011. Health Service and Population Research Department, Institute of Psychiatry, King's College London.
Contact: Dr Sarah Clement, sarah.clement@kcl.ac.uk, Professor Graham Thornicroft, graham.thornicroft@kcl.ac.uk
Clement S, Brohan E, Jeffery D, Henderson C, Hatch SL, Thornicroft G. Development and psychometric properties the Barriers to Access to Care Evaluation scale (BACE) related to people with mental ill health. BMC Psychiatry, 2012 12:36.

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Appendix D: Relevant Variables Spreadsheet (Based on ICD-10 codes)

F30 Manic Episode	F40 Phobic anxiety disorders	F50 Eating disorders	F60 Specific personality disorders
F30.0 Hypomania	F40.0 Agoraphobia	F50.0 Anorexia nervosa	F60.0 Paranoid personality disorder
F30.1 Mania without psychotic symptoms	.00 Without panic disorder	F50.1 Atypical anorexia nervosa	F60.1 Schizoid personality disorder
F30.2 Mania with psychotic symptoms	.01 With panic disorder	F50.2 Bulimia nervosa	F60.2 Dissocial personality disorder
F30.8 Other manic episodes	F40.1 Social phobias	F50.3 Atypical bulimia nervosa	F60.3 Emotionally unstable personality disorder
F30.9 Manic episode, unspecified	F40.2 Specific (isolated) phobias	F50.4 Overeating associated with other psychological disturbances	.30 Impulsive type
F31 Bipolar affective disorder	F40.8 Other phobic anxiety disorders	F50.5 Vomiting associated with other psychological disturbances	.31 Borderline type
F31.0 Bipolar affective disorder, current episode hypomanic	F40.9 Phobic anxiety disorder, unspecified	F50.8 Other eating disorders	F60.4 Histrionic personality disorder
F31.1 Bipolar affective disorder, current episode manic without psychotic symptoms	F41 Other anxiety disorders	F50.9 Eating disorder, unspecified	F60.5 Anankastic personality disorder
F31.2 Bipolar affective disorder, current episode manic with psychotic symptoms	F41.0 Panic disorder [episodic paroxysmal anxiety]	F51 Nonorganic sleep disorders	F60.6 Anxious [avoidant] personality disorder
F31.3 Bipolar affctive disorder, current episode mild or moderate depression	F41.1 Generalized anxiety disorder	F51.0 Nonorganic insomnia	F60.7 Dependent personality disorder
.30 Without somatic syndrome	F41.2 Mixed anxiety and depressive disorder	F51.1 Nonorganic hypersomnia	F60.8 Other specific personality disorders
.31 With somatic syndrome	F41.3 Other mixed anxiety disorders	F51.2 Nonorganic disorder of the sleep / wake schedule	F60.9 Personality disorder, unspecified
F31.4 Bipolar affective disorder, current episode severe depression without psychotic symptoms	F41.8 Other specified anxiety disorders	F51.3 Sleepwalking [somnambulism]	F61 Mixed and other personality disorders
F31.5 Bipolar affective disorder, current episode severe depression with psychotic symptoms	F41.9 Anxiety disorder, unspecified	F51.4 Sleep terrors [night terrors]	F61.0 Mixed personality disorders
F31.6 Bipolar affective disorder, current episode mixed	F42 Obsessivecompulsive disorder	F51.5 Nightmares	F61.1 Troublesome personality changes
F31.7 Bipolar affective disorder, currently in remission	F42.0 Predominantly obsessional thoughts or ruminations	F51.8 Other nonorganic sleep disorders	F62 Enduring personality changes, not attributable to brain damage and disease
F31.8 Other bipolar affective disorders	F42.1 Predominantly compulsive acts [obsessional rituals]	F51.9 Nonorganic sleep disorder, unspecified	F62.0 Enduring personality change after catastrophic experience

F31.9 Bipolar affective disorder, unspecified	F42.2 Mixed obsessional thoughts and acts	F52 Sexual dysfunction, not caused by organic disorder or disease	F62.1 Enduring personality change after psychiatric illness
F32 Depressive episode	F42.8 Other obsessivecompulsive disorders	F52.0 Lack or loss of sexual desire	F62.8 Other enduring personality changes
F32.0 Mild depressive episode	F42.9 Obsessivecompulsive disorder, unspecified	F52.1 Sexual aversion and lack of sexual enjoyment	F62.9 Enduring personality change, unspecified
.00 Without somatic syndrome	F43 Reaction to severe stress, and adjustment disorders	.10 Sexual aversion	F63 Habit and impulse disorders
.01 With somatic syndrome	F43.0 Acute stress reaction	.11 Lack of sexual enjoyment	F63.0 Pathological gambling
F32.1 Moderate depressive episode	F43.1 Posttraumatic stress disorder	F52.2 Failure of genital response	F63.1 Pathological firesetting [pyromania]
.10 Without somatic syndrome	F43.2 Adjustment disorders	F52.3 Orgasmic dysfunction	F63.2 Pathological stealing [kleptomania]
.11 With somatic syndrome	.20 Brief depressive reaction	F52.4 Premature ejaculation	F63.3 Trichotillomania
F32.2 Severe depressive episode without psychotic symptoms	.21 Prolonged depressive reaction	F52.5 Nonorganic vaginismus	F63.8 Other habit and impulse disorders
F32.3 Severe depressive episode with psychotic symptoms	.22 Mixed anxiety and depressive reaction	F52.6 Nonorganic dyspareunia	F63.9 Habit and impulse disorder, unspecified
F32.8 Other depressive episodes	.23 With predominant disturbance of other emotions	F52.7 Excessive sexual drive	F64 Gender identity disorders
F32.9 Depressive episode, unspecified	.24 With predominant disturbance of conduct	F52.8 Other sexual dysfunction, not caused by organic disorder or disease	F64.0 Transsexualism
F33 Recurrent depressive disorder	.25 With mixed disturbance of emotions and conduct	F52.9 Unspecified sexual dysfunction, not caused by organic disorder or disease	F64.1 Dualrole transvestism
F33.0 Recurrent depressive disorder, current episode mild	.28 With other specified predominant symptoms	F53 Mental and behavioural disorders associated with the puerperium, not elsewhere classified	F64.2 Gender identity disorder of childhood
.00 Without somatic syndrome	F43.8 Other reactions to severe stress	F53.0 Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified	F64.8 Other gender identity disorders
.01 With somatic syndrome	F43.9 Reaction to severe stress, unspecified	F53.1 Severe mental and behavioural disorders associated with the puerperium, not elsewhere classified	F64.9 Gender identity disorder, unspecified
F33.1 Recurrent depressive disorder, current episode moderate	F44 Dissociative [conversion] disorders	F53.8 Other mental and behavioural disorders associated with the puerperium, not elsewhere classified	F65 Disorders of sexual preference
.10 Without somatic syndrome	F44.0 Dissociative amnesia	F53.9 Puerperal mental disorder, unspecified	F65.0 Fetishism

.11 With somatic syndrome	F44.1 Dissociative fugue	F54 Psychological and behavioural factors associated with disorders or diseases classified elsewhere	F65.1 Fetishistic transvestism
F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms	F44.2 Dissociative stupor	F55 Abuse of nondependence-producing substances	F65.2 Exhibitionism
F33.3 Recurrent depressive disorder, current episode severe with psychotic symptoms	F44.3 Trance and possession disorders	F55.0 Antidepressants	F65.3 Voyeurism
F33.4 Recurrent depressive disorder, currently in remission	F44.4 Dissociative motor disorders	F55.1 Laxatives	F65.4 Paedophilia
F33.8 Other recurrent depressive disorders	F44.5 Dissociative convulsions	F55.2 Analgesics	F65.5 Sadomasochism
F33.9 Recurrent depressive disorder, unspecified	F44.6 Dissociative anaesthesia and sensory loss	F55.3 Antacids	F65.6 Multiple disorders of sexual preference
F34 Persistent mood [affective] disorders	F44.7 Mixed dissociative [conversion] disorders	F55.4 Vitamins	F65.8 Other disorders of sexual preference
F34.0 Cyclothymia	F44.8 Other dissociative [conversion] disorders	F55.5 Steroids or hormones	F65.9 Disorder of sexual preference, unspecified
F34.1 Dysthymia	.80 Ganser's syndrome	F55.6 Specific herbal or folk remedies	F66 Psychological and behavioural disorders associated with sexual development and orientation
F34.8 Other persistent mood [affective] disorders	.81 Multiple personality disorder	F55.8 Other substances that do not produce dependence	F66.0 Sexual maturation disorder
F34.9 Persistent mood [affective] disorder, unspecified	.82 Transient dissociative [conversion] disorders occurring in childhood and adolescence	F55.9 Unspecified	F66.1 Egodystonic sexual orientation
F38 Other mood [affective] disorders	.88 Other specified dissociative [conversion] disorders	F59 Unspecified behavioural syndromes associated with physiological disturbances and physical factors	F66.2 Sexual relationship disorder
F38.0 Other single mood [affective] disorders	F44.9 Dissociative [conversion] disorder, unspecified		F66.8 Other psychosexual development disorders
.00 Mixed affective episode	F45 Somatoform disorders		F66.9 Psychosexual development disorder, unspecified
F38.1 Other recurrent mood [affective] disorders	F45.0 Somatization disorder		F68 Other disorders of adult personality and behaviour
.10 Recurrent brief depressive disorder	F45.1 Undifferentiated somatoform disorder		F68.0 Elaboration of physical symptoms for psychological reasons
F38.8 Other specified mood [affective] disorders	F45.2 Hypochondriacal disorder		F68.1 Intentional production or feigning of symptoms or disabilities either physical or psychological [factitious disorder]

F39 Unspecified mood [affective] disorder	F45.3 Somatoform autonomic dysfunction		F68.8 Other specified disorders of adult personality and behaviour
	F45.4 Persistent somatoform pain disorder		F69 Unspecified disorder of adult personality and behaviour
	F45.8 Other somatoform disorders		
	F45.9 Somatoform disorder, unspecified		
	F48 Other neurotic disorders		
	F48.0 Neurasthenia		
	F48.1 Depersonalizationderealization syndrome		
	F48.8 Other specified neurotic disorders		
	F48.9 Neurotic disorder, unspecified		

Appendix E: Data Collection client master list – Version 1

KEY:
AD = Anxiety Disorder
DD = Depressive Disorder
ED = Eating Disorder
PeD = Personality Disorder
PsD = Psychotic Disorder
SUD = Substance Use Disorder
TD = Traumatic Disorder
OTHER = Specify

Client identifier #	**Client identity/contact information**	**Medical Diagnosis**	**Behavioral Health Diagnosis**	**Referred to treatment from PCP?**
DNP001				Y N
DNP002				Y N
DNP003				Y N
DNP004				Y N
DNP005				Y N
DNP006				Y N
DNP007				Y N
DNP008				Y N
DNP009				Y N
DNP010				Y N
DNP011				Y N
DNP012				Y N
DNP013				Y N
DNP014				Y N
DNP015				Y N
DNP016				Y N
DNP017				Y N

Appendix F: Data Sheet 1 – Version 1

Client identifier #: ____

Behavioral Health diagnosis: ______________________________________

Medical diagnosis: ____

Demographics:

AGE	18-25	26-35	36-45	46-55	56-65	Over 65
GENDER	Male		Female		Transgender	
MARITAL STATUS	Married	Single	Widowed	Divorced	Separated	Civil Union
LEVEL OF EDUCATION	Less than High School (HS)	HS Graduate	Some College	College Grad – Associate's degree	College Grad – Bachelor's degree	College Grad – Graduate degree
EMPLOYMENT STATUS	Full-time	Part-time	Seasonal	Self-employed	Unemployed	Disabled

NOTES FROM INTERVIEW:

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Appendix G: Researcher telephone script – Version 2

“Hi! This is ________ *(researcher’s name)* and I’m calling about your visit with Dr. Vaccaro’s office on __________ *(date of visit)*. I see that Dr. Vaccaro referred you to outpatient services for ___________ *(behavioral health diagnosis)*. I’m calling people from Dr. Vaccaro’s office to try and determine if they struggled with getting an appointment or following up with their appointments. I was wondering if I might ask you a few questions?”

IF YES:

“These questions that I’m asking are part of a research study for a doctor of nursing practice project for Rutgers University. I’m the primary researcher of the study and I’m hoping that by asking you some questions, I can better understand what kept you from making or keeping your appointment. I’m going to use this information to suggest ways that AtlantiCare can help with improving access to the services you want and need. It’s voluntary, there’s no penalty if you choose not to participate, and you can stop anytime you want. The only people who will have access to your identifying information will be me and my research team. It shouldn’t take more than 10 minutes of your time to complete this call.” <*consent procedure*>

“First, did you make the initial appointment with the provider Dr. Vaccaro referred you to?”

IF NO, ask unanswered questions on Data Sheet 1 and complete the BACE-3

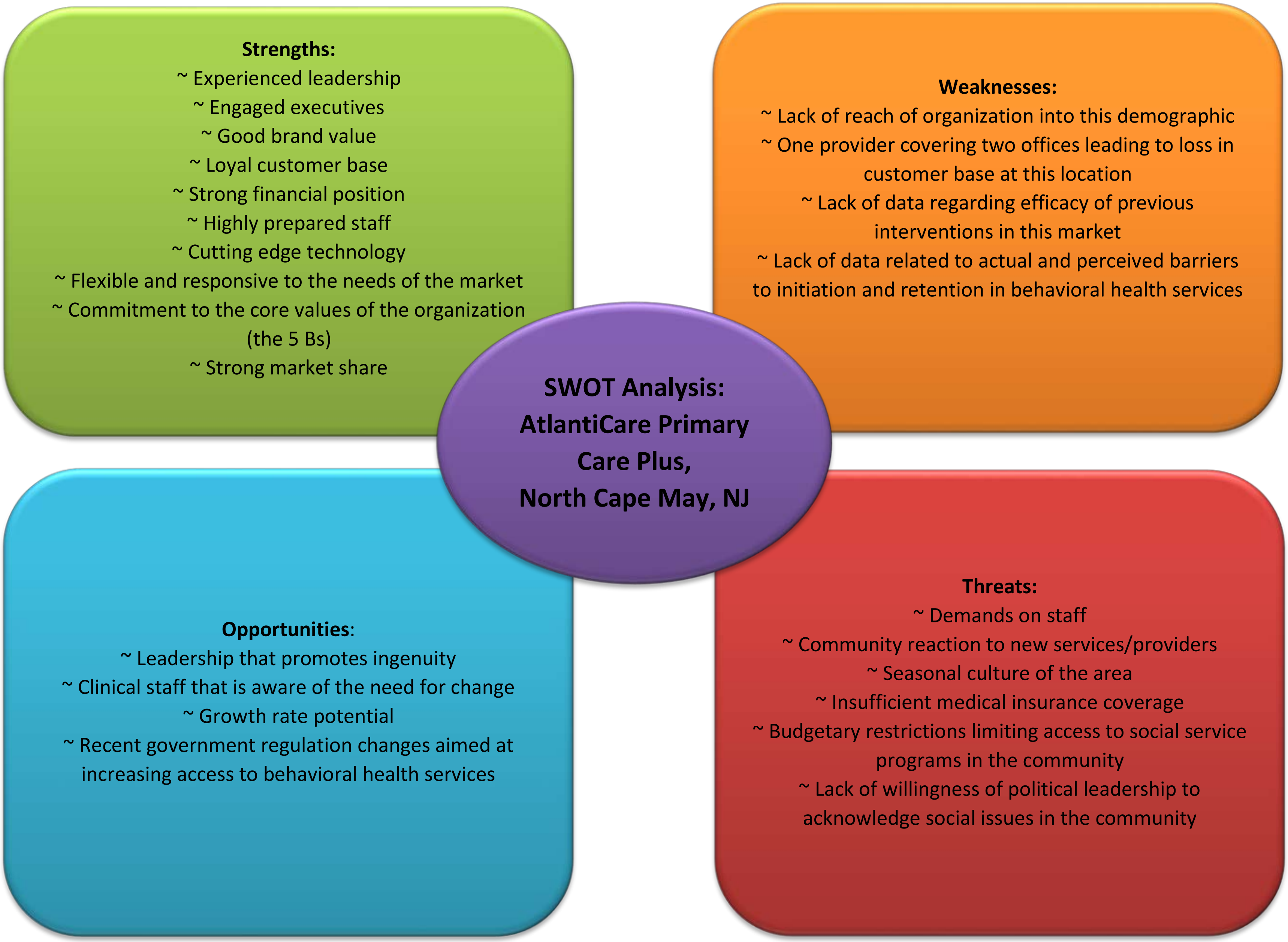
IF YES “That’s great! Are you still involved in care with this provider?”

- *IF NO*, complete the BACE-3 and ask unanswered questions on Data Sheet 1
- *IF YES*, complete the BACE-3 and ask unanswered questions on Data Sheet 1

“Can you think of anything that made the process of connecting with a provider easier?”

Once completed, terminate the phone call: “Thank you for taking the time to answer these questions. If you want to know the results of this study, I’ll be glad to share them with you. I’ll take your email and send you a copy when all of the work is completed sometime next year. If you have any questions or comments about the study or any other questions or concerns, you can call Dr. Vaccaro’s office at 609-884-3680” <*consent procedure*>

Figure 1: SWOT Analysis of AtlantiCare Primary Care Plus, North Cape May, NJ



SWOT Analysis:
AtlantiCare Primary
Care Plus,
North Cape May, NJ

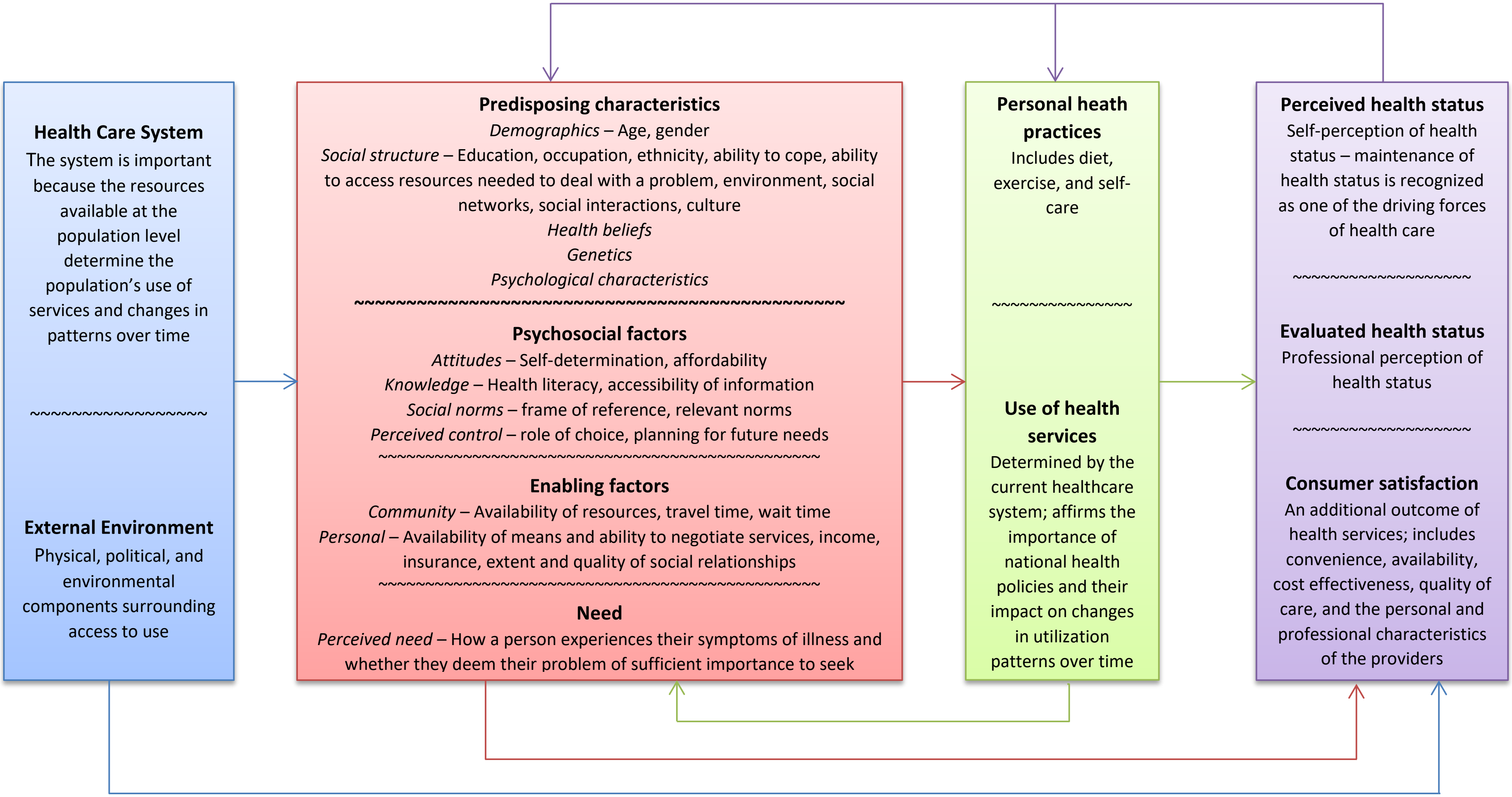
Strengths:
~ Experienced leadership
~ Engaged executives
~ Good brand value
~ Loyal customer base
~ Strong financial position
~ Highly prepared staff
~ Cutting edge technology
~ Flexible and responsive to the needs of the market
~ Commitment to the core values of the organization (the 5 Bs)
~ Strong market share

Weaknesses:
~ Lack of reach of organization into this demographic
~ One provider covering two offices leading to loss in customer base at this location
~ Lack of data regarding efficacy of previous interventions in this market
~ Lack of data related to actual and perceived barriers to initiation and retention in behavioral health services

Opportunities:
~ Leadership that promotes ingenuity
~ Clinical staff that is aware of the need for change
~ Growth rate potential
~ Recent government regulation changes aimed at increasing access to behavioral health services

Threats:
~ Demands on staff
~ Community reaction to new services/providers
~ Seasonal culture of the area
~ Insufficient medical insurance coverage
~ Budgetary restrictions limiting access to social service programs in the community
~ Lack of willingness of political leadership to acknowledge social issues in the community

Figure 2: Andersen's Behavioral Health Model



Health Care System
The system is important because the resources available at the population level determine the population's use of services and changes in patterns over time

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External Environment
Physical, political, and environmental components surrounding access to use

Predisposing characteristics
Demographics – Age, gender
Social structure – Education, occupation, ethnicity, ability to cope, ability to access resources needed to deal with a problem, environment, social networks, social interactions, culture
Health beliefs
Genetics
Psychological characteristics

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Psychosocial factors
Attitudes – Self-determination, affordability
Knowledge – Health literacy, accessibility of information
Social norms – frame of reference, relevant norms
Perceived control – role of choice, planning for future needs

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Enabling factors
Community – Availability of resources, travel time, wait time
Personal – Availability of means and ability to negotiate services, income, insurance, extent and quality of social relationships

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Need
Perceived need – How a person experiences their symptoms of illness and whether they deem their problem of sufficient importance to seek

Personal heath practices
Includes diet, exercise, and self-care

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Use of health services
Determined by the current healthcare system; affirms the importance of national health policies and their impact on changes in utilization patterns over time

Perceived health status
Self-perception of health status – maintenance of health status is recognized as one of the driving forces of health care

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Evaluated health status
Professional perception of health status

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Consumer satisfaction
An additional outcome of health services; includes convenience, availability, cost effectiveness, quality of care, and the personal and professional characteristics of the providers

Andersen, R. M. (1995, March). Revisiting the Behavioral Health Model and access to medical care: Does it matter? *Journal of Health and Social Behavior*, *36*(1), 1-10. Retrieved from http://www.jstor.org/stable/2137284

radley, E. H., McGraw, S. A., Curry, L., Buckser, A., King, K. L., Kasl, S. V., & Andersen, R. (2002, October). Expanding the Andersen Model: The Role of Psychosocial Factors in Long–Term Care Use. *Health Services Research*, *37*(5), 1221-1242.
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Figure 3: Anticipated DNP Project Budget
(All costs incurred will be the responsibility of the researcher)

EXPENSE	*ANTICIPATED COST*	*ACTUAL COST*
Copies	$75	$90
Gifts for the office staff	$250	Not purchased yet
Spiral bound report for AtlantiCare organization – evidence-based interventions for removing barriers – 10 copies	$25 X 10 = $250	$225
Hardbound completed DNP project final papers – 5 copies	$100 X 5 = $500	Not purchased yet
Final project presentation poster board	$100	$65
FINAL BUDGET	**$1175**	