Integration of Behavioral Health into Primary Care:

A Case Study -Perspectives from UPMC-St. Margaret's Family Health Clinic

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DISSERTATION

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DEDICATION

I want to take this opportunity to dedicate this dissertation to my husband Tim, my son Sam and my daughter Drew. Without the support of my family allowing me the time to pursue and attain my doctoral degree I would not have been able to achieve this major milestone in my life. It was countless hours, days, weeks, months and years that were devoted to this pursuit and my gratitude for their patience and understanding is beyond what can be expressed in words.

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ABBREVIATIONS

ACA	Affordable Care Act
AHRQ	Agency for Healthcare Research and Quality
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services
HHS	Department of Health and Human Services
HRSA	Health Resources and Services Administration
NAMI	National Alliance on Mental Illness
NIH	National Institute of Health
NIMH	National Institute of Mental Health
MBHO	Managed Behavioral Health Organization
MHPEA	Mental Health Parity and Addiction Equity Act
SAMHSA	Substance Abuse and Mental Health Services
SMI/SPMI	Severe Mental Illness/Severe and Persistent Mental Illness
UIC	University of Illinois at Chicago
UPMC	University of Pittsburgh Medical Center
WHO	World Health Organization

SUMMARY

Mental health issues are treatable, but access to care can be difficult. The mental health resource usage by patients has increased since the introduction of the MHPAEA of 2008. The shortage of mental-health providers in the U.S. has long been considered a significant problem, however it is becoming even more pronounced as people are finding they have insurance coverage to seek care.

One approach that has been recognized as one way to address the issue of mental health access is by delivering behavioral health services within the primary care setting. Integrated care has the potential to produce better patient outcomes, possibly reduce health care costs, and may improve the patient's experience of care.

Integrated care or collaborative care is one possible way to treat the "whole person" and potentially help to reduce overall healthcare costs. Behavioral health integration has been supported by a variety of organizations including those in the medical field. While integrated care is an admirable goal and could potentially help ease the burden of mental health care; by continuing to separate and minimize mental health aspects of care, it cannot be achieved.

As we seek to find where and how integration might be working and continuing to adapt to the needs and gaps of integration, we look for those cases from which it may be beneficial to replicate where it is working. One such program is UPMC (The University of Pittsburgh Medical Center) St. Margaret Family Health Clinics functioning within the UPMC health system. It has been identified as one of the leading health systems in Pennsylvania including early work on integration of behavioral health services into primary care.

There are few models that have experience or evidence of functioning at the highest level or how organizations may move towards the highest level of integrated care. Exploration into UPMC/St. Margaret's Family Health Clinic, an integrated primary care practice, provides insights into the factors that impact an integrated practice, including those factors that will guide leadership in the process of integration and moving to a deeper level of integrated care.

This study looked to answer the research questions for an exploration into an exemplar case of integrated behavioral health. The findings were from the practice members perceptions on integrated behavioral health care and then compared with the literature. Themes that emerged such as: collaboration, communication, teamwork, ongoing and adaptive change are identified as constructs of integrated care. Additionally, this study found effective communication is central to team success and should be considered an attribute and guiding principle of the integrated team.

Further, the adaptive leadership that is threaded throughout the discussion points demonstrate that addressing the complex issue with some urgency is needed the longer- term goal or "story" must move parallel to be achieved. The overall adaptive leadership approach is present in each of the findings: 1) Integrated behavioral health care in a system that does not yet universally support integrated care is an adaptive problem, 2)The challenge facing leadership is a complex issue that requires multiple pieces to come together and function comprehensively, 3) Change is a difficult process for most but integrating behavioral health into primary care requires embracing the collective knowledge to benefit the overall organization, 4) The ability to link the practice values, abilities and goals to that of organizational change by including all involved stakeholders; 5) Recognize when something may not be working and adapting the process to address the need or sometimes having the ability to abandon the approach altogether if needed.

The recommendations for this practice are built around the findings of the study and emphasize those areas most important to the practice: build the case for why social services must be part of the business model, expand on the innovative approach to integration of the pharmacists as part of the integrated care team and design an integrated performance reporting plan.

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I. INTRODUCTION AND BACKGROUND

a. Study Objectives

The objective of this study is to explore how clinical practice activities and factors are impacting the level of behavioral health integration into primary care. Understanding what characteristics impact the current level of integration at University of Pittsburgh Medical Center-St. Margaret's Family Health Clinics (Integrated: Close Collaboration Approaching an Integrated Practice) and exploring the factors that may facilitate or inhibit progress towards a stronger level of integration will contribute to the knowledge base and recommendations for integrated healthcare delivery.

While integrated behavioral health into primary care settings is perceived to be a positive path towards addressing the disparity in care for mental health issues, it is beyond the scope of this study to explore the perspectives of mental health providers and primary care providers outside UPMC integrated practice. The aim of this research is to better understand how UPMC integrated behavioral health services has evolved over time through qualitative information gathered from semi-structured interviews which will be synthesized to form themes to inform long term sustainability and continued progress. The research will explore the facilitators, strengths, barriers, and gaps to integrated behavioral health as perceived by the providers/staff specific to the UPMC integrated practice.

b. Background and Context

1. Burden of Mental Illness

Serious mental illness is a subgroup of mental illness defined as a mental disorder with serious functional impairment that substantially limits at least one major life activity for affected

individuals (U.S. Department of Health and Human Services (HHS, 2016). In 2012 alone, approximately 43.8 million American adults aged 18 years or older had a mental illness, which corresponds to 18.5 percent of the country's adult population (HHS, 2014). In the same age cohort, ten million American adults had a serious mental illness (4.2% of the adult population).

Understanding the burden of disease is important to realizing how health conditions can impact society. The Global Burden of Disease study uses a measure called disability adjusted life years, or DALYs, to compare the burden of disease across many different disease conditions. DALYs measure lost years of healthy life regardless of whether the years were lost to premature death or disability, and the disability component is weighted for severity of the disability. In the late 1990s, under the leadership of Chris Murray, who's executive director of the Evidence and Information for Policy Cluster from 1998 to 2003, WHO undertook a new assessment of the global burden of disease study conducted in 1990 (Mathers, 2006). The 2001 GBD study, which has expanded the framework of the 1990 GBD study to: 1)quantify the burden of premature mortality and disability by age, sex, and region for 136 causes; 2) develop internally consistent estimates of incidence, prevalence, duration, and case fatality rates for more than 500 conditions resulting from the foregoing causes; 3) analyze the contribution to this burden of major physiological, behavioral, and social risk factors by age, sex, and region (Mathers, 2006)

Using the more inclusive DALY (Disability Adjusted Life Year)format, calculating the disabling aspects of more than 100 diseases in a comparative framework the Global Burden of Disease (GBD) documented for the first time that mental disorders were among the leading causes of diminished human productivity and impaired social functioning. In fact, in the Global Burden of Disease 2004 Update (WHO, 2008) unipolar disorders (also known as major depressive disorder the unipolar connotes a difference between major depression and bipolar

depression, which refers to an oscillating state between depression and mania) are projected to surpass cardiovascular, respiratory diseases and HIV by the year 2030 (Figure 1.). Population ageing and changes in the distribution of risk factors have accelerated the noncommunicable disease share of total disease burden in many developing countries (WHO, 2008).

Figure 1. Ten leading causes of burden of disease, world, 2004 and 2030 (Source: WHO The Global Burden of Disease 2004 Update)

2004 Disease or injury	As % of total DALYs	Rank	Rank	As % of total DALYs	2030 Disease or injury
Lower respiratory infections	6.2	1	1	6.2	Unipolar depressive disorders
Diarrhoeal diseases	4.8	2	2	5.5	Ischaemic heart disease
Unipolar depressive disorders	4.3	3	3	4.9	Road traffic accidents
Ischaemic heart disease	4.1	4	4	4.3	Cerebrovascular disease
HIV/AIDS	3.8	5	5	3.8	COPD
Cerebrovascular disease	3.1	6	6	3.2	Lower respiratory infections
Prematurity and low birth weight	2.9	7	7	2.9	Hearing loss, adult onset
Birth asphyxia and birth trauma	2.7	8	8	2.7	Refractive errors
Road traffic accidents	2.7	9	9	2.5	HIV/AIDS
Neonatal infections and other[a]	2.7	10	10	2.3	Diabetes mellitus
COPD	2.0	13	11	1.9	Neonatal infections and other[a]
Refractive errors	1.8	14	12	1.9	Prematurity and low birth weight
Hearing loss, adult onset	1.8	15	15	1.9	Birth asphyxia and birth trauma
Diabetes mellitus	1.3	19	18	1.6	Diarrhoeal diseases

Mental illness imposes a substantial burden on individuals and society and can have serious consequences. Mental illness may result in an increased risk of living in poverty, having a lower socioeconomic status, and having lower educational attainment. Major depression, as well as other psychiatric disorders, has been shown to impair family function, increase the risk of teenage childbearing, and increase the risk of domestic violence. (NIH, 2015) Untreated mental conditions can contribute to economic loss because they potentially exacerbate school and work

absenteeism, healthcare expenditure and unemployment. Conversely, mental health well-being can be linked to long term improvements in the individuals functioning in social, family, education and work productivity. (NAMI, 2016)

Additionally, people with severe mental illness often die 13-30 years earlier than the general population from medical conditions that could have been treated by a primary care provider. (NIMH, 2018). When considering the strong overlap with comorbid conditions in the physical health arena and how improvement in mental health is likely to contribute to an overall healthier individual who can contribute more to society, it makes logical sense to address mental health as part of a public health initiative. (Presley-Cantrell, 2012).

2. Cost of Untreated/Undertreated Mental Illness

The World Economic Forum, recognizing that chronic non-communicable diseases would be the largest cost drivers in health care in the 21st century, asked a group of health economists to estimate global costs and project costs to 2030 (Bloom, 2011). Their estimate based on 2010 data showed mental disorders as the largest cost driver at $2.5 trillion in global costs in 2010 and projected costs of $6.0 trillion by 2030. The costs of mental health care can be estimated much the way we estimate other health care costs. The Agency for Healthcare Research and Quality (AHRQ), cites a cost of $57.5B in 2006 for mental health care in the U.S., equivalent to the cost of cancer care (Soni, 2009). But unlike cancer, much of the economic burden of mental illness is not the cost of care, but as stated earlier includes the loss of income due to unemployment, expenses for social supports, and a range of indirect costs due to a chronic disability that begins early in life.

A report from the World Economic Forum (WEF) attempts to capture the costs of several classes of non-communicable diseases (NCDs) and projects the economic burden through 2030. Recognizing there is no ideal method, the authors adopted three approaches to estimate global economic burden: (a) a standard cost of illness method, (b) macroeconomic simulation, and (c) the value of a statistical life. The results of all three methods project staggering costs over the next two decades, with cardiovascular disease, chronic respiratory disease, cancer, diabetes, and mental health representing a cumulative output loss of $47 Trillion, roughly 75% of the global GDP in 2010 (Bloom, 2011).

The World Health Organization has already reported that mental illnesses are the leading causes of disability adjusted life years (DALYs) worldwide, accounting for 37% of healthy years lost from NCDs (WHO, 2011). Depression alone accounts for one third of this disability (WHO, 2008). The new report estimates the global cost of mental illness at nearly $2.5 Trillion (two-thirds in indirect costs) in 2010, with a projected increase to over $6 Trillion by 2030. Consider that the entire global health spending in 2009 was $5.1Trillion and the annual GDP for low-income countries is less than $1 Trillion worldwide (Bloom, 2011).

The World Economic Forum report also provides comparisons across on-communicable diseases (NCD) to give some sense of the drivers of global economic burden. Mental health costs are the largest single source; larger than cardiovascular disease, chronic respiratory disease, cancer, or diabetes. Mental illness alone will account for more than half of the projected total economic burden from NCDs over the next two decades and 35% of the global lost output. Considering that those with mental illness are at high risk for developing cardiovascular disease, respiratory disease, and diabetes, the true costs of mental illness must be even higher (Bloom, 2011).

Those with severe mental illness (such as schizophrenia, bipolar disorders, major depressive disorders) require resources for housing needs, community services, income support, employment and training needs (SAMHSA, 2016). As such they are likely to need government assistance because of the disability, they will depend on government assistance that includes more than just the treatment of the mental health issue. The Substance Abuse and Mental Health Administration (SAMHSA) estimated US national expenditure for mental health care was $147 billion in 2009. Combining this figure with updated projections of lost earnings and public disability insurance payments associated with mental illness, an estimate for the financial cost of mental disorders was at least $467 billion in the U.S. in 2012 (NIMH, 2019; estimates updated from (Insel, 2008)). Making up part of these economic figures are Social Security disability benefits, including both Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI), paid to individuals who are disabled because of mental disorders. The Social Security Administration reports that in 2012, 2.6 and 2.7 million people under age 65 with mental illness-related disability received SSI and SSDI payments, respectively, which represents 43 and 27 percent of the total number of people receiving such support, respectively (NIMH 2019; calculated by using SSI Annual Statistical Report 2012 and Annual Statistical report SSDI 2012.) Mental illness impacts the broader economy from that perspective and should be addressed as a public health issue. (SAMSHA, 2016)

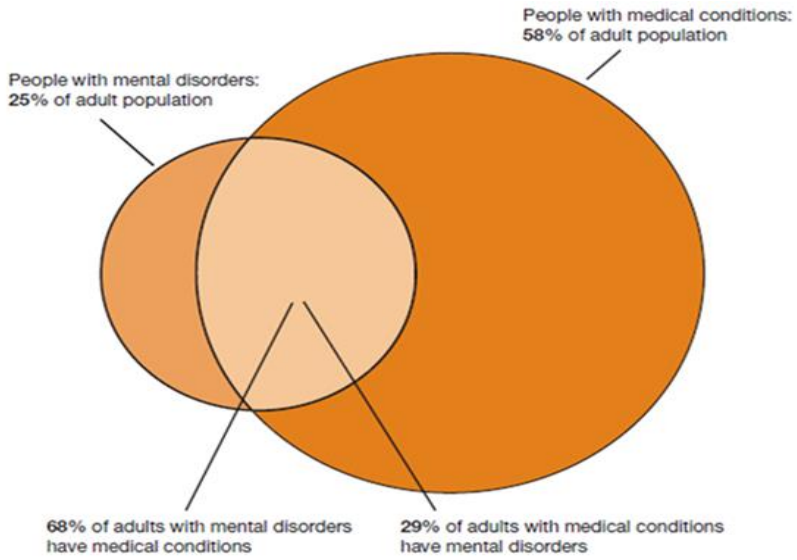
Addressing mental health can help contribute to a more satisfying life which includes a focus on recovery and subsequently leads to a stronger contribution to society as a whole. Individuals living with mental illness tend to have many aspects of their lives impacted which include but not limited to: relationships, housing, employment, and financial security. Without proper treatment a person with mental illness is at greater risk for being homeless (SAMHSA) or

incarcerated (Glaze, 2016). Further consequence arising from the disease progression itself is that it strains the very relationships a person relies on for support. Conversely, getting someone the help they need provides the opportunity to strengthen or maintain relationships, opportunities to pursue employment, health insurance, housing and financial security. Chronic illness creates an abundance of issues, untreated chronic illness exacerbates the fundamental needs to sustain a positive quality of life (Megari, 2013).

3. Co-Occurring Behavioral Health/Mental Health and Physical Health

According to a fact sheet by SAMHSA (2012), 68% of adults with mental illness have one or more chronic illness (Figure 2; adapted National Comorbidity Survey Replication). Rates of mental health problems are significantly higher for patients with certain chronic conditions such as diabetes, asthma, and heart conditions (Chapman, 2005). And people are living longer with chronic illness and preventative measures are lacking; the likelihood of an individual having co-occurring illness has increased (Goodell, 2011).

Figure 2. Source: The National Comorbidity Survey Replication 2001-2003



The reason for the strong overlap of co-occurring conditions vary but we know that there is a high prevalence of both mental disorders and chronic conditions (CDC, 2012). Having a mental health disorder is a risk factor for developing a chronic condition and vice versa (Goodell, 2011). People living with mental illnesses experience a range of physical symptoms that result both from the illness itself and as a consequence of treatment. Mental illnesses can alter hormonal balances and sleep cycles, while many psychiatric medications have side-effects ranging from weight gain to irregular heart rhythms (Evans, 2005). These symptoms create an increased vulnerability to a range of physical conditions.

Furthermore, the way that people experience their mental illnesses can increase their susceptibility of developing poor physical health. Mental illness can impact social and cognitive function and decrease energy levels, which can negatively impact the adoption of healthy behaviors. People may lack motivation to take care of their health or they may adopt unhealthy habits (such as eating and sleeping habits, smoking or substance abuse) contributing to worse health outcomes (Chapman, 2005).

Although associations exist between mental illness (specifically depression/anxiety) and chronic illness; treatment for the mental health condition(s) is lacking (Figure 3) (Milliman, 2006). As discussed earlier, failure to treat both physical and mental health conditions results in poorer health outcomes and higher health care costs. (NIMH, 2015).

Figure 3. Source: Milliman Report 2006

Chronic Medical Condition	% with depression/anxiety	% treated for depression/anxiety
Arthritis	32.3%	7.1%
Hypertension	30.5%	5.5%
Chronic Pain	61.2%	5.9%
Diabetes Mellitus	30.8%	5.2%
Asthma	60.5%	6.8%
Coronary Artery Disease	48.2%	5.7%
Cancer	39.8%	5.7%

Furthermore, because mental illness and substance use disorders have substantial comorbidity with other diseases that are also increasing in burden (e.g., cardiovascular disease and diabetes (Moussavi, 2007), it makes sense to include screening and interventions for mental and substance use disorders in all aspects of the health-care system (Ngo, 2013).

4. Historical and Societal Norms of Mental Health Access (Separated Care)

The nineteenth century saw the growth of something like an organized asylum system in the United States. Asylums themselves were nothing new; London's Bethlem Royal Psychiatric Hospital, better known as Bedlam, was founded in 1247. In the United States however, the creation of these asylums took time, in part because their cost was deferred to state governments, which were leery of accepting the financial burden of these institutions (Grob, 1994). Patients in asylums were called "acute" cases, whose symptoms had appeared suddenly and whom doctors hoped to be able to cure. Patients who were deemed "chronic" sufferers were cared for in their home communities. The so-called chronic patients encompassed a wide range of people: those suffering from the advanced stages of neurosyphilis, people with epilepsy, dementia, Alzheimer's disease, and even alcoholism (Bautista, 2003).

As county institutions grew crowded, officials transferred as many patients as they could over to new, state-run institutions in order to lower their own financial burdens. As the

institutionalized population mushroomed, treatment of the mentally ill evolved. Doctors throughout the 19th century placed their hopes in what was they called “moral treatment,” rehabilitation through exposure to “normal” habits (Grob, 1994). Moral treatment developed with a focus on social welfare and individual rights. At the start of the 18th century, the "insane" were typically viewed as wild animals who had lost their reason (Borthwick, 2001). They were not held morally responsible but were subject to scorn and ridicule by the public, sometimes kept in madhouses in appalling conditions, often in chains and neglected for years or subject to numerous tortuous "treatments" including whipping, beating, bloodletting, shocking, starvation, irritant chemicals, and isolation (Borthwick, 2001). Most institutions were attached to farms, partly to provide food for the people living there, but also to provide “restorative” work. There is, at best, mixed evidence on whether such treatments were effective, although supporters claimed high rates of recovery for patients treated in asylums. In any event, moral treatment was only ever intended for acute cases, so it fell out of fashion under pressure from the ever-multiplying population in hospitals (Bautista, 2003).

Mental diseases did not have any clear causes or things that could be treated and so were often attributed to non-physical causes (demon possession, punishment by God, moral weakness, etc.) probably because that was part of how the larger culture made sense out of the world. It was a seemingly natural separation between physical and mental disorders. Once this distinction was in the culture it would be (and has proven) hard to dislodge (Burns, 2015). The hard truth is that integrating behavioral health will be an uphill battle against history, entrenched interests, and some legitimate skepticism that although integration sounds good, putting it into practice will be difficult.

In the United States, our own history mimics this evolution, psychiatric asylums and state-run psychiatric hospitals were where individuals went (in many cases involuntarily committed) to get treatment for their mental conditions. This early idea of mental illness is one that can easily stir a sense of stigma if one were to reflect on it. As reports became main stream that people with mental illness were treated poorly and many times in unsanitary, unsafe, and inhumane situations; public outcry for civil rights and a demand for change was hard to ignore.

Prior to the 1950s, most Americans with serious mental health problems were taken care of at large public mental hospitals, often for extended periods—years, if not decades. By some accounts, the introduction of antipsychotic drugs like Thorazine made it possible for people to leave these hospitals (Mechanic, 2014). It was this scenario as well as his personal connection (his sister was diagnosed with mental illness) that led President John F. Kennedy in 1963 to sign the Community Mental Health Centers Act which promoted the deinstitutionalization of those with mental illness to be treated in a community outpatient setting. (National Council for Behavioral Health, 2015)

Deinstitutionalization was made possible primarily because of Medicare, Medicaid, and other safety-net programs. Regardless of the reason, the number of people in public institutions fell drastically, with day-to-day care shifting to community settings and hospital care for people with serious problems shifting to general hospitals, often in specialized psychiatric units. As Mechanic notes, many experts and advocates for the mentally ill see this 50-year history of treating people in a community setting as a well-intentioned but woefully executed policy that has resulted in jails and prisons taking the place of those emptied mental hospitals.

Before the development of medical expense insurance, patients were expected to pay all other health care costs out of their own pockets, under what is known as the fee-for-service

business model (HIAA, 1997). During the 1920s, individual hospitals began offering services to individuals on a pre-paid basis, eventually leading to the development of Blue Cross organizations in the 1930s (O'Hare, 2000). Today, most comprehensive private health insurance programs cover the cost of routine, preventive, and emergency health care procedures, and most prescription drugs, but this was not always the case (Link, 2001). The rise of private insurance was accompanied by the gradual expansion of public insurance programs for those who could not acquire coverage through the market.

As the idea of health insurance coverage evolved and ultimately the way reimbursement for health care would function; the distinction between medical care and mental health care would become even more obvious. As discussed above, when mental health treatment was separated out from medical care treatment 30 years ago, it created a separate reimbursement structure for practitioners and independent mental health care managed care companies (MBHOs) came into existence. With MBHOs, healing the mind became progressively more and more separated from that of the body (Link, 2001).

Stigma, for those with mental health problems, was assured and perpetuated, not because of the nature of the mental disorders themselves, but because they were placed in an autonomous reimbursement system. The stigma associated with mental health problems almost certainly has multiple causes. Throughout history people with mental health problems have been treated differently, excluded and even brutalized. This treatment may come from the misguided views that people and often leads to difficulty in seeking treatment, discussing issues around mental illness when they arise and even leads to discrimination in employment and communities. Mental disorders have remained segregated and stigmatized. (Link, 2004)

5. Mental Health Parity – Mental Health Care Equal to Physical Health Care

Over the past six decades, one, if not the most important, policy issue in behavioral health has been the establishment of benefit and coverage parity for the prevention and treatment of mental illness and addiction. Beginning with the directives of President John F. Kennedy (discussed earlier) in the early 1960s and continuing over the next 50 years to the recent passage of the Patient Protection and Affordable Care Act (ACA), this movement toward parity has been perhaps the most important strategic guide for policy within our field. However, the path to parity has been neither quick nor direct (Grob, 2006). Instead, it has been a guiding principle for a set of many incremental, sequential improvements over a long period. One needs only to look back less than a decade to view a less than optimal situation for people living with SMIs and addictions. For these adults, only 50% to 60% actually received any care at that time (Duckworth, 2013). The remainder were either part of the homeless population, in and out of local and county jails, or were being cared for by family members (Duckworth, 2013). At the same time, state mental health agency budgets were being cut by about $4.5 billion after 2008 due to the Great Recession, which made the community care situation for persons with SMI even more precarious (Glover, 2012). The community mental health system was very poorly funded, offered inadequate services in many places, and simply did not extend into many rural areas. Little or nothing was done to address initial psychosis at that time, and many persons with SMI were not enrolled in Medicaid (Glover, 2012).

Additionally, access to mental health care has long been stymied by the efforts of insurers to discourage treatment utilization by imposing severe limits on benefits coverage. In contrast to insurance coverage for general medical health care, those seeking mental health treatment have faced higher deductibles, co-pays, and limits on annual and lifetime benefits, if offered at all.

Insurance coverage mandates are generally dictated by the insurers themselves unless strong efforts including societal norms and legislation demand change (Duckworth, 2013). The nation is taking notice of the importance of mental health care and the importance of parity. The Mental Health Parity Act first signed into legislation in 1996, updated and revised to Mental Health Parity and Addiction Equity Act (MHPAEA) in 2008, with further provisions within the Affordable Care Act (ACA) in 2010; Mental Health Parity is defined as follows: "Cost-sharing requirements, quantitative treatment limitations, and non-quantitative treatment limitations must be no more restrictive for mental health and substance abuse services than for medical/surgical benefits…"(CMS, 2008). In an attempt to further address some identified issues within parity, in July 2016, The House of Representatives passed bill H.R. 2646 "Helping Families in Mental Health Crisis Act". This bill (resolution) will help to further address gaps in America's mental health care system by accommodating different perspectives on complex issues. It provides for crisis response services, grants to track inpatient to outpatient care, early intervention and supports integration of mental health, substance abuse and primary care.

With the passage of the ACA in 2010, many in the behavioral health care field saw its commitment to behavioral health prevention and treatment as the final step to parity. However, as so often proves true, the passage of legislation is not the same as its successful implementation. In fact, a number of roadblocks to the full achievement of "parity" have occurred during the implementation process. The probability of having mental health parity is limited by the lack of priority for mental health care such as; mental health provider availability, access to care, and fair market reimbursement for providers. According to a report released by NAMI in April 2015, federal changes mandating so-called parity between mental and physical health care do not, in practice exist for the vast majority of Americans who are insured. The greatest hardship NAMI

identified was respondents experience in trying to locate covered mental health and substance abuse care (MHSA) therapists followed closely by difficulties in accessing psychiatrists (The National Psychologist, July/August 2015).

Mental health issues are treatable, but access to care can be difficult. The mental health resource usage by patients has increased since the introduction of the MHPAEA of 2008. The shortage of mental-health providers in the U.S. has long been considered a significant problem (National Alliance for Mental Illness, 2016). But it is becoming more acute as people are encouraged to seek treatment or find they can afford it for the first time as a result of new federal requirements that guarantee mental-health coverage in insurance plans (Mental Health Parity Act of 2008; Centers for Medicare & Medicaid Services). This indicates a long unmet need for mental health services, which existed due to a lack of recognition of mental health (Health Care Cost Institute, 2013).

According to data from the Department of Health and Human Services, 55 percent of U.S. counties, all of which are rural, do not have a practicing psychiatrist, psychologists or social workers. That translates into approximately 111 million people living in area where mental health professional shortages are reported (U.S. Department of Health and Human Services). According to Association of American Medical Colleges, there are approximately 28,000 practicing Psychiatrists in the United States but this number continues to dwindle as more are aging and retiring (Bishop, 2016). Estimates from the U.S. Department of Health and Human Services show there is a shortage of 1,846 psychiatrists and 5,931 other professionals. Two out of three primary care physicians have reported difficulty in referring patients for mental health care (Bishop, 2016); twice the number reported for any other specialty. The discrepancy in access to mental

health care, results in a 42% increase in patients going to emergency departments for psychiatric services over a recent 3-year period (National Council for Behavioral Health).

The U.S. Department of Health and Human Services (HHS) announced in September 2016 more than $44.5 million in awards to training programs to increase the number of mental health providers and substance abuse counselors across the country. The spending on this program is to ensure that Americans of all ages have access to quality mental health and substance abuse services according to HHS. Further, the program emphasizes integrating behavioral health, primary care, violence awareness and prevention, and the involvement of families in the prevention and treatment of mental and substance use disorders, (HRSA, 2016). This emphasis on integrating care should help to strengthen the next generation of behavioral health workforce providers so they can work more effectively in a variety of 21st century health care settings (HRSA, 2016).

6. Integration: Addressing Mental Health Access

One approach that has been recognized as one way to address the issue of mental health access is by delivering behavioral health services within the primary care setting. Patients already being seen by their primary care provider may benefit from programs able to address both physical health and behavioral health needs (Herzlinger, 2006). Integrated care has the potential to produce better patient outcomes, possibly reduce health care costs, and may improve the patient's experience of care.

Integrated care is perceived to be a positive step towards addressing mental health care access issues, however there are still barriers that exist such as the major shift away from separated care, unaligned payment systems, and skill level and willingness of the providers.

(McDaniel, 2014). For the most part, providers both on the behavioral health side and the medical side view integrated care as a good path towards addressing mental health issues, however, the uncertainly lies with skill level in treating behavioral health issues as well as the shift in thinking and approach to care (Kinman, 2015). Overall, however, both mental health professionals and primary care provider perspectives ultimately need to be considered for integrated care to be a viable option to care.

i. The Case for Integration

Lack of communication between the mental health and medical systems has been an important factor underlying poor quality of care for people with comorbid conditions (Druss, 2011). Addressing the "whole person", which essentially includes his/her physical and mental health issues is essential to positive health outcomes and cost-effectiveness (NIMH, 2018). The historical separation of behavioral health care from physical health care promotes the opposite of a whole-person, patient-centered approach to primary care—a challenge that remains but is slowly being addressed. One potential area of interest is the idea of integrated care or collaborative care to treat the "whole person" and potentially help to reduce overall healthcare costs. Behavioral health integration has been supported by a variety of organizations, including the Institute of Medicine and the American College of Physicians (Crowley et al. 2015).

Collaborative care approaches have been found to be highly cost effective from a society perspective (Druss, 2011). Further, recent clinical trials have suggested that cost savings may be achievable over the long term particularly among the costliest and most complex patients such as those with comorbid diabetes and depression (Druss, 2011). While integrated care is an admirable goal and could potentially help ease the burden of mental health care; by continuing to cordon off mental health aspects of care, it cannot be achieved. Discussion must take place within the health

community about how to best retain trust for those with mental illness and/or substance use disorders while not perpetuating segregation which inadvertently promotes poor quality care.

The current structure of existing mental health services and the lack of priority in terms of resources provided (both publicly and privately) to support mental health services and how that pertains to their overall impact on health status is apparent. Mental health is broken out into a segment all its own and while expert focus should occur as it does in other specialties with physical ailments such as oncology, endocrinology, etc.; more integrative techniques to include the treatment of mental health/illness is primed to have a much better outcome than treating as an entirely separate entity. As Freeman states in his article published in Preventing Chronic Disease (2010), synergistic integration of activities for mental and public health is more effective than individual stakeholder efforts. Over the course of time, we have seen improvements in overall health status when collaborative efforts are taken. For example, when treating diabetes, from a case management perspective these patients are provided any number of unlimited resources (seeing different specialist as often as needed, medicine, disease management counseling, physical activity advisors, nutritionists, etc.) and patients are able to manage their disease more effectively without limitations (other than those that may be self- imposed (Freeman, 2010)

Even though most primary care providers have had some experience (through residency or in practice) in treating some mental health conditions, many feel they lack the training and do not necessarily feel equipped to treat the more severe mental illness cases (Ion, 2017). According to National Integration Academy Council (NIAC), 80% of patients with behavioral health conditions first seek care in medical settings yet 60 to 70% of these patients get no treatment for their mental health disorders (HHS, 2017). As such, without the proper exposure or experience, and within the constraints of a primary care appointment, the quality of care for mental health

issues is varied. Consider the primary care appointments are generally limited to 15-20 minutes. The limitations on appointments generally stems from a financial perspective (more patient appointments equal more billing opportunities) not necessarily based on comprehensive medical patient care (Herzlinger, 2006). Combining mental health with primary care has the potential to reduce costs, increase the quality of care provided and ultimately save lives (NIMH, 2018).

In addition to training for the workforce, payment and delivery reforms by private payers, state governments, and the Federal Government are needed to remove the partition between physical and behavioral health and ensure that patients have increased access to behavioral health providers in medical settings (Mechanic, 2007). Removing the partition between physical and behavioral health would result in improved clinical outcomes, and potentially "major cost savings." (Goodell, 2015)

ii. Integration Models-SAMHSA

Integrated care combines primary health care and mental health care into one setting. Providing integrated care helps patients and their providers by blending expertise of mental health, substance use and primary care with feedback form both the patients and their caregivers (NIMH, 2018). Combining all the areas together helps to create a team-based approach to whole person health. Through coordination both the physical aspects of health as well as the mental health issues associated with severe mental illness can be addressed.

As more health systems across the nation look to integrate care, SAMHSA provides frameworks as well as a flowchart to assist organizations as to readiness and which model may be the best fit (SAMHSA, 2019). The model and type depend on variables such as infrastructure, patient type, location, availability of resources, level of integration, and outcome achievement.

An article in American Journal of Managed Care outlines an example of how integration has been tested using those individuals diagnosed with SMI (severe mental illness) and coordination of care in Pennsylvania (Schuster, 2016). This study examined changes in service utilization using a difference-in-differences model, comparing a study group with a comparison group, and conducted key informant interviews to better understand aspects of program implementation. The study was focused on the outcomes of the individuals and compared hospitalization rates between the two groups. The study results showed there was a decrease in hospitalizations for those with the "connected care" program as compared to the hospitalizations for the control group which stayed the same. While this article focused on a specific type of care coordination and specific quantitative outcomes, it also provides insights into the rationale for integrated care for improved overall health. A key ingredient in the integration of mental health is communication and collaboration. The authors specifically call this out as a facilitator as well as a potential barrier sometimes dependent upon the patient consent, sometimes dependent on the health systems themselves (Schuster, 2016).

iii. Framework of Integration Types

Integrated care is geared toward meeting the patients' needs in one setting, however it can be varied on how it is delivered based on the practice infrastructure and readiness. Integrated care can focus on: 1) where the care is taking place, 2) how services are being coordinated, 3) what type of care is being provided. Integration can happen in a behavioral health setting, primary care, specialty offices or a home health focus. The SAMHSA designed integrated care frameworks generally fall into three categories; coordinated, co-located or integrated.

a. Coordinated: Behavioral and physical health clinicians practice separately within their respective systems. Information regarding mutual patients may be exchanged as needed,

and collaboration is limited outside of the initial referral. Within this type of integrated care, the main focus is on simply communicating the information about the patient between behavioral health and primary care providers. There isn't a collaboration on treatment plans or next steps for care. In many cases, the primary care provider may not even receive information outside of an electronic communication showing that the behavioral health appointment took place.

b. Co-located: Behavioral and physical health clinicians deliver care in the same practice, the focus of this type of integrated care is on physical proximity of the behavioral and primary car providers. Co-location is more of a description of where services are provided rather than a specific service. Patient care is often still siloed to each clinician's area of expertise similar to the coordinated care type collaboration on patient treatment plans or follow up is not the main focus. Ease of collaboration may be more primed under this type based on the fact that the providers may have more opportunity being the same physical location.

c. Integrated: Behavioral and physical health clinicians work together to design and implement a patient care plan. Tightly integrated, on-site teamwork with a unified care plan. Often connotes close organizational integration as well, perhaps involving social and other services. This type of integrated care is concentrated on actual practice change and transformation.

Within each type of integrated care, there are different levels of collaboration between the providers. For example, the minimal level of collaboration is where mental health and medical health practices are separate in every way and there is virtually no communication (a traditional approach to care). Whereas full integration involves a single health system and the medical and

mental health providers are working in tandem to provide care to the patient utilizing a shared medical record. (NIMH, 2018)

Collaborative care is a team-based approach that add two types of services to primary care: behavioral health care management and consultation with a mental health professional. The behavioral health manager is part of the care team and will work with the primary care provider to evaluate the patient's mental health care need. If it is determined that the patient has a mental health need, the care team (primary care and behavioral health care manager) will work together with the patient to create a treatment plan that can include, medication, psychotherapy etc. The behavioral care manager will be in contact with the patient to manage and determine if the plan needs changes. Additionally, the case manager (usually a Licensed Clinical Social Worker) and the primary care provider will review the records with a mental health specialist to assess if changes are needed including if additional specialty services are needed such as a psychiatrist. This type of "hub based" approach is modeled after the Massachusetts Child Psychiatry Access Project (MCPAP- an example of one level of integrated care) and provide primary care providers with immediate telephone consultations with a psychiatrist if the psychiatrist is not available or at the site for immediate care. Case management and face-to-face evaluations are also available for complicated cases. (NIMH, 2018)

An example of the integrated type of integrated care is the patient-centered medical home (PCMH) (Megari, 2013). PCMH involves coordinating a patient's overall health care needs at any age. Patients play active roles in their health care. Providers coordinate all aspects of preventive, acute, and chronic needs of patients using the best available evidence and appropriate technology. These health homes were created for individuals on Medicaid with chronic conditions such as mental health and substance use disorders, asthma, diabetes, heart disease, and

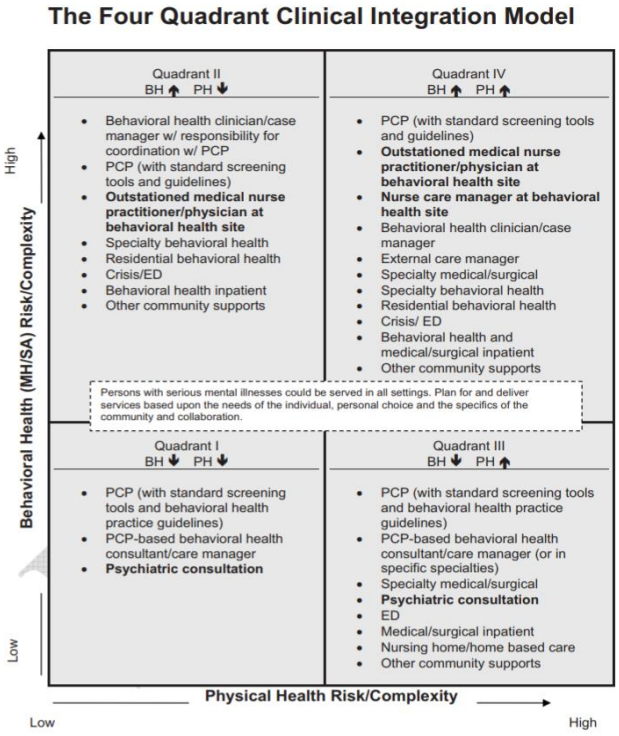
obesity (Megari, 2013). This is a team-based approach with a "whole-person focus", specifically emphasizing integrating behavioral health and primary care. Health homes provide comprehensive care management, coordination, and follow-up. They also offer patient and family support, referrals to community and support services, and health promotion (NIMH, 2018).

iv. Integration Practice Readiness-Example

As health systems prepare to integrate care there are tools that are available to assist practices in how to approach and determine practice resources and readiness. As with any new approach there are variables that may not be characteristics of the practice now but may be something that the practice will look to evolve forward. The model provided by SAMHSA is a comprehensive guide to determining what level a practice may be ready to undertake based on the practice characteristics and resources.

The Four Quadrant Clinical Integration Model describes integration levels in terms of primary care and behavioral health care complexity and risk. (Figure 4. Source: SAMHSA, 2018). This Model would be part of the readiness a practice or health system may use as part of their needs assessment. The location, types of providers, and services vary depending on the complexity of patients' conditions. For instance, individuals with mild-to-moderate physical and/or behavioral health issues may be best cared for in a primary care setting with integrated behavioral health providers. For patients with complex general medical conditions as well as mild-to-moderate behavioral health disorders, a medical specialty setting with integrated behavioral health providers may be appropriate. Those with severe behavioral problems as well as medical conditions may receive the most comprehensive care in a specialty behavioral health center with integrated general medical providers, or a health home (SAMSHA, 2018).

Figure 4. The Four Quadrant Clinical Integration Model, SAMHSA, 2018.



7. Exemplar Case of Integration

Those seeking mental health care are still facing access issues post ACA and post federal parity laws. The impact of undertreated or untreated mental illness has societal burdens including cost and poor health outcomes. The comorbidity of physical issues and mental health issues are well documented; however, the segregation of medical and mental health services has been a historical norm. In the everchanging landscape of healthcare responsibilities and resource allocation, integration of mental health into primary care medical facilities has been identified as a potential approach to improve access for behavioral health (including mental health and substance use disorders) and improve the burden on the healthcare systems by addressing the holistic approach to health.

As we seek to find where and how integration might be working and continuing to adapt to the needs and gaps of integration, we look for those cases from which it may be beneficial to replicate where it is working. One such program is UPMC (The University of Pittsburgh Medical Center) St. Margaret Family Health Clinics functioning within the UPMC health system. The University of Pittsburgh Medical Center is a large health system in the western part of Pennsylvania based in Pittsburgh. It has been identified as one of the leading health systems in Pennsylvania including early work on integration of behavioral health services into primary care. Saint Margaret's Hospital has a history dating back to 1898 named and dedicated to a Margaret Shoenberger who was the beloved wife of John Shoenberger; a wealthy family that lived in Lawrenceville, PA. Margaret died of breast cancer at a young age and it was after John's death in 1889 that he left the people of Pittsburgh three acres of land and a large sum of money ($10 Million) to build and maintain a hospital to immortalize his wife (Brignano, 1998). It was a hospital that was a longtime ministry of the Episcopal Diocese of Pittsburgh (Gundersen, 2016) and while the hospital eventually outgrew its structure it continued to expand to include a Family Medicine residency program and in 1996 merged with University of Pittsburgh Medical Center and became officially known as UPMC St. Margaret (Levine, 2005). At the time of the merger UPMC St. Margaret stated its continued dedication to maintain its mission of service to the community (Brignano, 1998).

The integrated care of UPMC St. Margaret's Family Health Clinic began with a partnership with Family Services of Western Pennsylvania to address the gaps in care in New Kensington, Pennsylvania has been working within the integrated model of care for over a decade. Having shown early promise in addressing an underserved area of Pittsburgh, the integrated health model has since been implemented in two other family health clinics in the

UMPC system for a total of three integrated health clinics. The three UPMC St. Margaret Family health Centers of Bloomfield-Garfield, Lawrenceville and New Kensington are located in the most impoverished Allegheny and Westmoreland County communities and are within walking distance of many who cannot afford transportation and would not seek health care at all if it were not for the close proximity to their homes (UPMC St Margaret grant proposal, 2012).

There are several factors that help to define this case as an exemplar one which will be spelled out in more detail in Chapter 3. One factor however, that helps to define this case is the longevity of integrated practice. This program has been operating in an integrated model of care for over a decade. This program identified early on several factors that would need to be considered including funding for the long term, provider adaptability to a new way to treat patients, staffing adaptability to the new model and patient adaptability to be more flexible to the approach of treatment. UPMC St. Margaret's has focused its approach to holistic care for patients; working within teams of care to identify, diagnose, treat and provide care for an array of medical and behavioral health issues within one collaborative integrated system.

UPMC St. Margaret's offers behavioral health services, at a convenient space for patients and alleviates the stigma many face seeking treatment for such personal issues. Working within a multi-disciplinary team that includes physicians, pharmacists, social workers, nurses, medical assistants and office staff the clinic is able to meet both the behavioral and physical health needs of their patients and their families.

The impact of integration of mental health services for the long term is difficult to measure for varying reasons. The idea is based on the theory that improving overall patient care will have benefits to many stakeholders including patients. Quantitative measures such as return on investment and short-term health outcomes are important however it remains to be a narrow

perspective and should include the longer-term implementation and sustainability such as direct and indirect outcomes which are difficult to measure from purely quantitative perspective. Quantitatively measuring longer term outcomes are difficult because there is a lack of conceptual consistency across integrated care systems and a lack of operational clarity for measuring sustainability; while there is guidance on model type or level of integration characteristics there isn't a consistent measurement tool or constructs to measure and then evaluate. Additionally, developing evidence about the value of sustaining interventions over time becomes challenging as patients get better or have their health issues addressed; theoretically their doctor visits would diminish over time but no definite way to correlate or quantify that to better outcomes. (Procter, 2015). Simply put, integrated care is still a fairly new concept that is needs guidance in place for measuring long term outcomes quantitatively.

Many integrated clinics rely primarily on the funding from a short-term grant (most often five years) to fill in the gaps created by resource allocation, non-existent billing codes (payers) as well as outdated policies that are not on track with the changing landscape of healthcare. The short-term focus of grant funding creates a gap in sustainability due at least in part to lack of planning for future resource allocation. Therefore, the evolution and continued implementation of integrating behavioral health into primary care has been stunted. Those programs that have shown longevity in integration have found innovative ways to address the resource allocation issues. The sites of the integrated clinics are in underserved areas and were chosen based on their own internal needs assessment. It is well documented that behavioral health issues have a common overlap with physical health and approximately 40% of patients with medical (physical) health issues are initially seen by a primary care provider (Kroenke, 2017). The purpose of integrating

care in these areas is to address overall healthcare (holistic approach) and access to care for behavioral health care issues.

Reimbursement cited in the literature as one of the common themes of sustainability gaps has been addressed by UPMC in utilizing a residency program from UPMC Medical Center to subsidize the project. In an effort to continue to forward progression, UPMC recognizes an opportunity to examine the characteristics of the current level of integration and the factors that will impact a deeper level of integrated care.

c. Problem Statement

Integration of behavioral health into primary care has been nationally recognized as a possible way to improve access and treatment for patients experiencing both behavioral health and physical health issues. As health systems are considering ways to improve access to treatment and care, levels or models of integration have been explored as an approach to address this gap. The highest level of integrated care is one of full collaboration in a transformed/ merged integrated practice. There are few models that have experience or evidence of functioning at the highest level or how organizations may move towards the highest level of integrated care. Further, there is a lack of clear evidence that describes how organizations may effectively move from any level of integration to a deeper level of integration. Exploration into an integrated primary care practice will provide insights into the factors that impact an integrated practice, including those factors that will guide leadership in the process of integration and moving to a deeper level of integrated care.

d. Research Questions

Q1. What are the stakeholder perceptions of the key characteristics of the current state of integration at University of Pittsburgh Medical Center/St. Margret's Family Health Clinics (UPMC)?

Q1a.How is integration at UPMC perceived and defined by UPMC staff?

Q1b.What are the strengths and gaps with the current level of integration?

Q2. How does the original vision of integration compare with actual integration at UPMC?

Q3. What are the perceived facilitators and barriers of the UPMC integrated care journey?

Q4. What is the process of documenting lessons learned?

Q5. What are the stakeholder perceptions for what actions need to be taken to move to a deeper level of integration?

e. Leadership Implications and Relevance:

1. Leadership: Leading Change

From a systems perspective healthcare reform provides reasoning and initiative to have a streamlined system of care. However, when there is a burden of fragmented care as there is within the mental health sector, this can negatively impact access to care. Treating mental health as part of an integrated system and identifying reasons behind access issues and working to address these gaps may help ease the burden of mental of resource availability from a mental health care access to services standpoint.

This mental health "gap" is ready for an adaptive/systems approach because of the strong link between the public health system, healthcare system, healthcare reform and the many stakeholders involved from the private sector, non-profit advocacy, and public health sector.

Innovative thinking is necessary when addressing these types of complex health situations. Strategically recognizing a "window of opportunity" for policy change that links several major health "silos" (physical health, mental health, substance use = public health) through one common thread is an innovative approach reminiscent of an adaptive challenge.

As with any adaptive leadership problem, however, this will take the cooperation and collaboration of various systems and stakeholders including, legislation, advocacy, private and public industry stakeholders (payers, pharmaceutical companies, education, hospitals) to name a few. As we work to make the Mental Health Parity Act more tangible, we must identify and address those issues that could potentially help to bring into balance the integration for mental health to be more on par with treatment and access for physical health. By assessing the perspectives of multiple stakeholder views, we may be better able to address how policy can begin to repair the segregated care of mental health.

2. Mental Health within Public Health

As discussed, mental health has a strong overlap with many physical problems and poor health behaviors. The increase in these conditions alone are shaping public health, but the relationship between co-occurring conditions of depression, bipolar, schizophrenia, anxiety disorders, substance use disorders –where one condition can exacerbate the other should not be ignored.

Focusing support for mental health care improvement extends to encompass the potential to help improve health behaviors such as smoking, drinking and illegal drugs; as well as chronic illnesses. Treating mental health issues and providing better quality care for mental health has the potential to address several public health initiatives together. The priorities of our health system

currently focuses more attention and funding to the physical side of healthcare and essentially side-stepping or allowing mental health to be low on the priority list. It is apparent that by addressing mental health issues, the overall public health outcomes could improve.

Mental health 'conditions' are often the underlying cause of a number of events making headlines in the media – mass shootings, violent acts, mass casualty events, etc. However, there is a spectrum of severity and impact a wider range of health impacts and behaviors – affecting the public health.

As Freeman states in his article published in Preventing Chronic Disease (2010), synergistic integration of activities for mental and public health is more effective than individual stakeholder efforts. Over the course of time, we have seen improvements in overall health status when collaborative efforts are taken. For example, when treating diabetes, from a case management perspective these patients are provided any number of unlimited resources (seeing different specialist as often as needed, medicine, disease management counseling, physical activity advisors, nutritionists, etc.) and patients are able to manage their disease more effectively without limitations (other than those that may be self- imposed).

3. Relevance and Significance of Study

The main purpose of this study is to capture a snapshot of UPMC integrated practices of behavioral health into primary care and identify those factors of success. UPMC has integrated care for over a decade providing examples of those areas that facilitate or inhibit the process of integration. It also seeks to understand how during their journey, UPMC has changed over time including expansion from one integrated clinic to three. Furthermore, the study will investigate

how the UPMC operates and produce findings to inform recommendations for how UPMC can continue to sustain integrated care.

II. Conceptual and Analytical Framework

a. Literature review

The literature review was conducted using Google, Google Scholar, and PubMed databases to provide context and relevant insights necessary to explore the research questions in this dissertation study. Literature that included integration practice themes that were outside of the United States was excluded. The reason for exclusion is the variability of cultures, payer systems and governance; the purpose of this study is to explore factors specific to integrated care within the United States. The following search terms and/or phrases were used: 'behavioral health integration into primary care', 'sustainability of behavioral health integration', 'frameworks for integration of behavioral health' 'models of behavioral health integration', 'best practices for integration of behavioral health into primary care', 'team based integrated care',' behavioral health and primary care integration', 'approaches to achieving integration of behavioral health into primary care', 'goals of behavioral health integration', 'outcomes of behavioral health integration', "measuring integrated care'. The results were categorized into broad areas that are to help streamline similar themes that are captured within the literature: 1- behavioral health integrated care the definition and frameworks; including core competencies of integration and levels of integration. For this first category, the core competencies and levels of integrated care are specifically from SAMSHA as this is the most frequently populated when conducting a search for integrated care. Additionally, it is the resource that many organizations will reference especially those organizations that are applying for federal grants as this provides a "one-stop shop" for getting started. And 2- factors that impact integration structural factors (practice, evaluation and future planning) and organizational factors (funding streams, workforce, and technology). The second category was combined into structural and organizational headings,

again to simplify the layout of the information. One theme that seemed to be common among the literature is the lack of standardization of integrated care framework including what and how to measure the factors. Therefore, the decision was made to use grouped headings as structural and organizational in order to compartmentalize the information.

1.Behavioral Health Integrated Care Definition and Levels

i. Definition of Integrated Care

"Integrated care" is a buzzword in healthcare and a key concept that has helped to drive and shape major policy- and practice-level changes in the health systems of North America, Europe and other parts of the world for well over two decades (Kodner, 2009). Integration is designed to create coherence and synergy between various parts of the healthcare enterprise to enhance system efficiency, quality of care, quality of life and consumer satisfaction, especially for complex and multi-problem patients or clients. Essentially, integrated care can be seen as a demand-driven response to what generally ails modern-day healthcare: access concerns, fragmented services, disjointed care, less-than-optimal quality, system inefficiencies and difficult-to-control costs. Despite the prevalence of this movement, a fundamental challenge has arisen with respect to the lack of a common definition of *integrated care*. The term is often used by different people to mean different things. It is most frequently equated with managed care, continuity of care, case/care management, patient-centered care, shared care, holistic care and integrated delivery systems, to name the most common iterations. (Kodner, 2009)

Integrated care, as defined by SAMSHA is “the systematic coordination of general and behavioral healthcare. Integrating mental health, substance abuse, and primary care services produces the best outcomes and proves the most effective approach to caring for people with

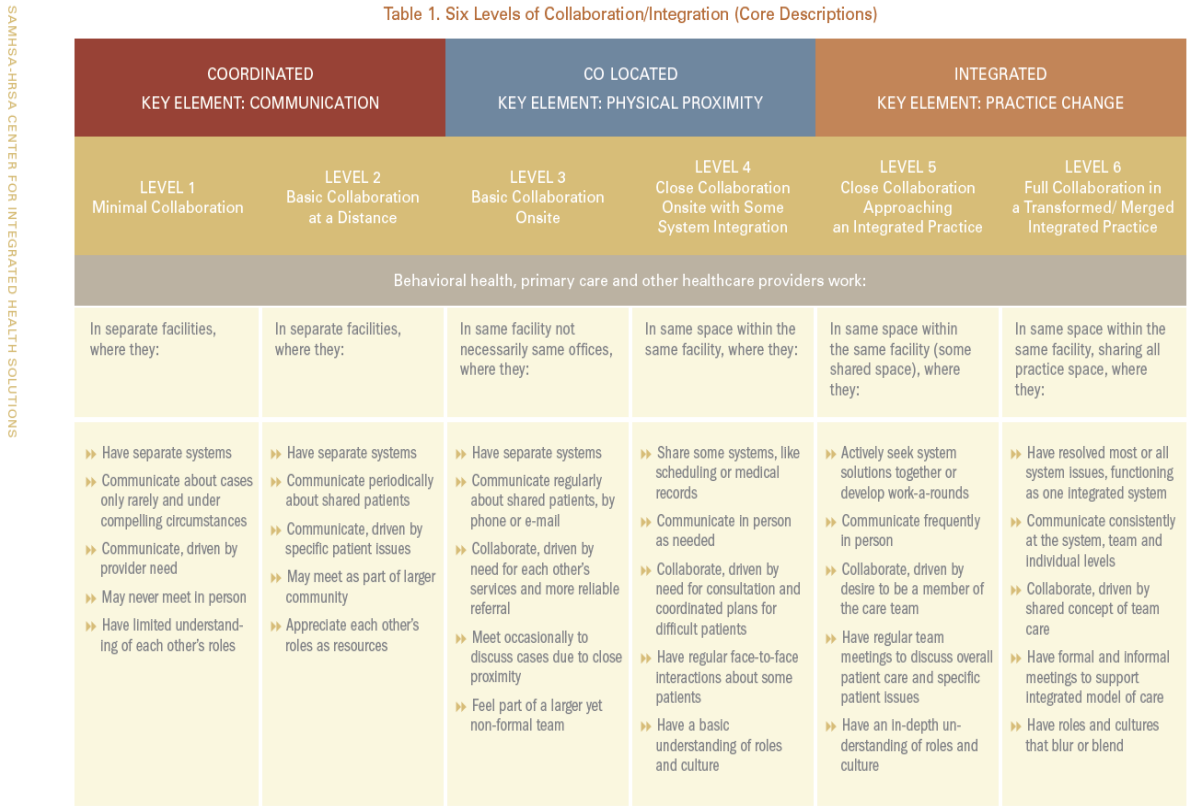
multiple healthcare needs" (SAMSHA, 2019). NIMH defines integrated care as "combining primary health care and mental health care in one setting." There are many ways to integrate care, and they may go by different names, including "Collaborative Care" or "Health Homes." Regardless of the specific definition, there are basically two principle characteristics of integrated care as a concept. First, it must involve bringing together key aspects in the design and delivery of care systems that are fragmented (i.e. 'to integrate' so that parts are combined to form a whole). Second, that the concept must deliver 'care', which in this context would refer to providing attentive assistance or treatment to people in need. Integrated care, then, results when "integration" is required to optimally to address "care". For the purposes of this study the definition and frameworks provided by SAMHSA has been widely adopted and will be the focus here.

ii. Levels of Integrated Care

Despite the increasing national focus on integrated care, there is no single, widely recognized set of competencies on this service approach for either the behavioral health or primary care workforce. To address this gap, the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration (HRSA) worked with the Center for Integrated Health Solutions (CIHS) to identify and disseminate core competencies on integrated practice relevant to behavioral health and primary care providers (Hodge, 2014). The development of these competencies was performed by the Annapolis Coalition on the Behavioral Health Workforce (www. annapoliscoalition.org) under the auspices of CIHS. The core competencies developed through this project are intended to serve as a resource for provider organizations as they shape job descriptions, orientation programs, supervision, and performance reviews for workers delivering integrated care. Similarly, the

competencies are to be a resource for educators as they shape curricula and training programs on integrated care. The goal was to develop a “core” or “common” set of competencies broadly relevant to working in diverse settings with diverse populations. The competency sets are not intended to be setting or population specific. Their principal relevance is to the integration of behavioral health with primary care. This combined level of integration framework proposes six levels of collaboration/integration (minimal collaboration, basic collaboration at a distance, basic collaboration onsite, close collaboration onsite with some system integration, close collaboration approaching an integrated practice, full collaboration in a transformed/merged integrated practice). While the overarching framework has three main categories — coordinated, co-located, and integrated care — there are two levels of degree within each category (Figure 5. Table 1; Source: SAMHSA). It is designed to help organizations implementing integration to evaluate their degree of integration across several levels and to determine what next steps they may want to take to enhance their integration initiatives (Hodge, 2014). The competencies discussed are principally intended to address levels 4, 5, and 6 in the SAMHSA framework (Figure 8), which involve either close or full collaboration and one of three organizational models: some systems integration, integrated practice, or transformed/merged practice. (Hodge, 2014)

Figure 5. Six Levels of Collaboration/Integration (Core Descriptions), Source: SAMHSA, 2018



SAMHSA-HRSA CENTER FOR INTEGRATED HEALTH SOLUTIONS

Table 1. Six Levels of Collaboration/Integration (Core Descriptions)

COORDINATED KEY ELEMENT: COMMUNICATION		CO LOCATED KEY ELEMENT: PHYSICAL PROXIMITY		INTEGRATED KEY ELEMENT: PRACTICE CHANGE	
LEVEL 1 Minimal Collaboration	LEVEL 2 Basic Collaboration at a Distance	LEVEL 3 Basic Collaboration Onsite	LEVEL 4 Close Collaboration Onsite with Some System Integration	LEVEL 5 Close Collaboration Approaching an Integrated Practice	LEVEL 6 Full Collaboration in a Transformed/ Merged Integrated Practice
Behavioral health, primary care and other healthcare providers work:					
In separate facilities, where they:	In separate facilities, where they:	In same facility not necessarily same offices, where they:	In same space within the same facility, where they:	In same space within the same facility (some shared space), where they:	In same space within the same facility, sharing all practice space, where they:
▸▸ Have separate systems ▸▸ Communicate about cases only rarely and under compelling circumstances ▸▸ Communicate, driven by provider need ▸▸ May never meet in person ▸▸ Have limited understanding of each other's roles	▸▸ Have separate systems ▸▸ Communicate periodically about shared patients ▸▸ Communicate, driven by specific patient issues ▸▸ May meet as part of larger community ▸▸ Appreciate each other's roles as resources	▸▸ Have separate systems ▸▸ Communicate regularly about shared patients, by phone or e-mail ▸▸ Collaborate, driven by need for each other's services and more reliable referral ▸▸ Meet occasionally to discuss cases due to close proximity ▸▸ Feel part of a larger yet non-formal team	▸▸ Share some systems, like scheduling or medical records ▸▸ Communicate in person as needed ▸▸ Collaborate, driven by need for consultation and coordinated plans for difficult patients ▸▸ Have regular face-to-face interactions about some patients ▸▸ Have a basic understanding of roles and culture	▸▸ Actively seek system solutions together or develop work-a-rounds ▸▸ Communicate frequently in person ▸▸ Collaborate, driven by desire to be a member of the care team ▸▸ Have regular team meetings to discuss overall patient care and specific patient issues ▸▸ Have an in-depth understanding of roles and culture	▸▸ Have resolved most or all system issues, functioning as one integrated system ▸▸ Communicate consistently at the system, team and individual levels ▸▸ Collaborate, driven by shared concept of team care ▸▸ Have formal and informal meetings to support integrated model of care ▸▸ Have roles and cultures that blur or blend

<u>COORDINATED CARE</u>- The key element under this segment is communication between providers. The providers are generally in separate systems and function separately, within this segment and communicate minimally usually driven by provider or patient specific issues. The communication functions as on a case by case need and may not necessarily share information outside of the specific case or situation.

Level 1 — Minimal Collaboration

Behavioral health and primary care providers work at separate facilities and have separate systems. Providers communicate rarely about cases. When communication occurs, it is usually based on a particular provider's need for specific information about a mutual patient.

Level 2 — Basic Collaboration at a Distance

Behavioral health and primary care providers maintain separate facilities and separate systems. Providers view each other as resources and communicate periodically about shared patients. These communications are typically driven by specific issues. For example, a primary care physician may request copy of a psychiatric evaluation to know if there is a confirmed psychiatric diagnosis. Behavioral health is most often viewed as specialty care.

CO-LOCATED CARE – The key element under this segment is physical proximity of the providers to each other.

Level 3 — Basic Collaboration Onsite

Behavioral health and primary care providers co-located in the same facility but may or may not share the same practice space. Providers still use separate systems, but communication becomes more regular due to close proximity, especially by phone or email, with an occasional meeting to discuss shared patients. Movement of patients between practices is most often through a referral process that has a higher likelihood of success because the practices are in the same location. Providers may feel like they are part of a larger team, but the team and how it operates are not clearly defined, leaving most decisions about patient care to be done independently by individual providers.

Level 4 — Close Collaboration with Some System Integration

There is closer collaboration among primary care and behavioral healthcare providers due to colocation in the same practice space, and there is the beginning of integration in care through some shared systems. A typical model may involve a primary care setting embedding a behavioral health provider. In an embedded practice, the primary care front desk schedules all appointments and the behavioral health provider has access and enters notes in the medical record. Often, complex patients with multiple healthcare issues drive the need for consultation, which is done through personal communication. As professionals have more opportunity to share patients, they have a better basic understanding of each other's roles.

INTEGRATED CARE – The key element under this segment is practice change. At this segment full transformation of care is the goal, major changes are taking place at the practice and health system level.

Level 5 — Close Collaboration Approaching an Integrated Practice

There are high levels of collaboration and integration between behavioral and primary care providers. The providers begin to function as a true team, with frequent personal communication. The team actively seeks system solutions as they recognize barriers to care integration for a broader range of patients. However, some issues, like the availability of an integrated medical record, may not be readily resolved. Providers understand the

different roles team members need to play and they have started to change their practice and the structure of care to better achieve patient goals.

Level 6 — Full Collaboration in a Transformed/Merged Practice

The highest level of integration involves the greatest amount of practice change. Fuller collaboration between providers has allowed antecedent system cultures (whether from two separate systems or from one evolving system) to blur into a single transformed or merged practice. Providers and patients view the operation as a single health system treating the whole person. The principle of treating the whole person is applied to all patients, not just targeted groups.

c. Characteristics of Integrated Care

As practices are moving into integrated care there needs to be a guide of activities to measure and competencies so that the organization can accurately assess all of the moving parts of integration. Important for measuring how to move through the different levels of integrated care are understanding the core competencies. The literature references in one form or another the core competency categories for integration to occur. For the purposes of this research and ease of standardized language referenced here are The Core Competencies for Integration (interpersonal communication, collaboration and teamwork, screening and assessment, care planning and care coordination, intervention, and cultural competence and adaptation) (Hodge, 2014) established and defined by SAMHSA are as follows:

INTERPERSONAL COMMUNICATION -The ability to establish rapport quickly and to communicate effectively with consumers of healthcare, their family members and other

providers. Examples include: active listening; conveying information in a jargon-free, non-judgmental manner; using terminology common to the setting in which care is delivered; and adapting to the preferred mode of communication of the consumers and families served.

Communication with the patient is important in any healthcare structure, however within integrated care it becomes even more important to the overall patient experience. As an organization moves through integrated care model, the office visit will likely be different that the traditional office visit. For example, it is vital to inform the patient of the visit structure (warm hand off for example) so the expectations are level set. Equally important for new patients and/or existing patients that may not have experienced an integrated practice. (APA, Jansen, 2014)

COLLABORATION & TEAMWORK-The ability to function effectively as a member of an interprofessional team that includes behavioral health and primary care providers, consumers and family members. Examples include: understanding and valuing the roles and responsibilities of other team members, expressing professional opinions and resolving differences of opinion quickly, providing and seeking consultation, and fostering shared decision-making.

Also recognized as level of interaction with the care team and the patients themselves; where the patient is included as part of the care delivery team not just an end user (Koenke, 2017).

SCREENING & ASSESSMENT -The ability to conduct brief, evidence-based and developmentally appropriate screening and to conduct or arrange for more detailed

assessments when indicated. Examples include screening and assessment for: risky, harmful or dependent use of substances; cognitive impairment; mental health problems; behaviors that compromise health; harm to self or others; and abuse, neglect, and domestic violence.

Using a reliable and validated screening tool and being able to make the assessment is paramount to solid care. Some of the tools referenced in the literature are the PHQ-2, PHQ-9 which help to screen for depression and suicide. Typically, the logical movement starts with a minimally invasive screening tool such as PHQ2 (Appendix 4) and a positive indication would then move to the deeper screening tool PHQ9 (Appendix 5).

CARE PLANNING & CARE COORDINATION -The ability to create and implement integrated care plans, ensuring access to an array of linked services, and the exchange of information among consumers, family members, and providers. Examples include: assisting in the development of care plans, whole health, and wellness recovery plans; matching the type and intensity of services to consumers' needs; providing patient navigation services; and implementing disease management programs.

INTERVENTION -The ability to provide a range of brief, focused prevention, treatment and recovery services, as well as longer-term treatment and support for consumers with persistent illnesses. Examples include: motivational interventions, health promotion and wellness services, health education, crisis intervention, brief treatments for mental health and substance use problems, and medication assisted treatments.

Part of the integrated treatment plan generally incorporates regular appointments but less frequently with longer session times (up to 30 minutes). Those patients with multiple

chronic conditions that are at risk may also have a telephone check in as a type of booster session. (APA, Jansen, 2014)

CULTURAL COMPETENCE & ADAPTATION -The ability to provide services that are relevant to the culture of the consumer and their family. Examples include: identifying and addressing disparities in healthcare access and quality, adapting services to language preferences and cultural norms, and promoting diversity among the providers working in interprofessional teams.

A successful program design recognizes the cultural competence requirement, incorporating the culture of the practice to where the practice is geographically located. Additionally, during the office visit the symptoms are evaluated using culturally appropriate methods including interventions tailored to cultural practice. The transformation of the practice will use all resources available including those community resources supportive of culture such as mono-lingual patients. (APA, Jansen, 2014).

As an evaluation of the practice whether formal or informal, using the core competencies can assist in understanding which competencies are most important to the individualized practice. A different mix with emphasis on some competencies more than others is probable.

2. Factors that Impact Integrated Behavioral Health Care

i. STRUCTURAL FACTORS

a. Systems Practice

Some key themes that come out of the literature are the understanding the values of the practice; including the values of the providers, key stakeholders and that of patients. As each health system may differ in what is valued, the perceptions of all stakeholders involved seems to

be key. One article studied the values of key stakeholders and found that there was solid overlap in answers. The list of values presented consists of both values specific to integrated care and values that are more generally related to healthcare delivery (Zonneveld, 2018). The 23 values identified have been generally described and can be applied to a broad range of circumstances. The values that were identified most frequently as it relates to the organization/systems practice:

Collaborative-Professionals work together in teams, in collaboration with clients, their families and communities, establishing and maintaining good (working) relationships.

Coordinated- Connection and alignment between the involved actors and elements in the care chain, matching the needs of the unique person. Between professionals, clients and/or families, within teams and across teams.

Transparent- Openly and honestly giving insight in information, decisions, consequences and results, between clients, their families, professionals and providers.

Empowering -Facilitating and supporting people to build on their strengths, make their own decisions, manage their own health and take responsibility for it.

Comprehensive -The availability of a wide range of services, tailored to the evolving needs and preferences of clients and their families.

Co-produced -Engaging clients, their families and communities in the design, implementation and improvement of services, through partnerships, in collaboration with professionals and providers.

Shared responsibility and accountability- The acknowledgment that multiple actors are responsible and accountable for the quality and outcomes of care, based on collective ownership of actions, goals and objectives, between clients, their families, professionals and providers.

Conversely, reported lease of all as important to the systems practice values for integrated care:

Innovative -Supporting, facilitating and creating space for innovation and future improvements in professional teams and organizations.

Trustful- Enabling mutual trust between clients, their families, communities, professionals and organizations, in and across teams.

Proficient -Knowledgeable and skillful services are provided by professionals, with a focus on quality.

Safe -Care services that are safe for clients, their families and professionals, including privacy and confidentiality protection.

As each organization would identify the values most important to their operating system, the values identified and captured here are found to be most (and least) important to integrated care gleaned from a systematic review of the literature. (Zonneveld, 2018)

b. Evaluation/Future Planning

As integrated care continues to evolve to address health system performance, detailed evidence on the measurement properties of integrated care remains vague and limited. (Procter, 2015). This growing importance of integrated care draws attention to the need for systematically investigating how stakeholders interpret and measure integrated care. In this widely evolving field of research, pioneers have regarded integrated care as a principal strategy for improving patient care and increasing health system performance. These improvements are often measured in terms of enhanced quality of the patient-care experience, better health and well-being of communities, and reduced per capita health care costs (APA, Jansen, 2014).

The overarching theme is that there are gaps in integrated care measurement. As the literature review provides some research in this area, it seems to underscore the lack of a standard measurement instruments and a unified framework for measurement of integrated care. As stated in a systematic review of measurement study (Bautista, 2016), their findings of all the available measurement instruments found that while logical for an instrument that captures all the relevant dimensions of integrated care, some have argued whether one comprehensive instrument would indeed provide a better measure. In any case, it must be emphasized that the objectives of an integrated care assessment should be the main consideration in selecting appropriate measures. This systematic review of the measurement properties of instruments does not directly answer how services can be integrated or how patients want care to be delivered. (Batista, 2016)

Continued progress towards integrated care will depend much on our ability to contrast and compare the impact of strategies across different levels and context. However, the complex interplay of structures, processes and outcomes of integrated care is difficult to disentangle, hampering evaluation of progress. Besides conceptual inconsistency, measuring integrated care is challenging because of a lack of tools to measure different aspects of integration and inherent difficulties in tracking down existing tools within a dispersed body of literature (Sutter, 2014).

The current literature on integrated care measurement also points out the important distinction between the measurement of structure/process (i.e., implementation and extent of achieving integration) and the measurement of outcomes (i.e., evidence of effectiveness). Prior systematic reviews on health systems integration found that studies describing instruments that can measure both the processes and the outcomes of integrated care are limited. (Bautista, 2016)

As organizations continue to evolve, there must be a component of evaluation to determine areas of growth, where resources may be needed and to concretely show the impact of

their integrated system of care. It is important to assess how the practice currently characterizes itself, even if not "naming" the level of integration reviewing the materials that establish constructs, activities and definitions will establish a baseline for which the practice can then solidify and identify gaps in care.

Critical success factors should include such areas of disparities in care, sustainability clarity on the purpose of integration, evaluation on meeting goals/purpose; continual capture of what is working and what is not- how those things are addressed. Predominantly lacking in future sustainability and evaluation is the capacity and ability to do so.

ii. ORGANIZATIONAL FACTORS

a. Technology

Electronic Health Records

There are technological tools that aid health care professionals in referring patients to a specialist, tracking a patient's progress, and connecting care to other providers. Using these tools leads to more evidence-based decision-making and collaborative care for patients. Integrated care will continue to evolve as it uses technology to inform physicians and support patients. In primary care, several technological advances include: computerized disease registries; computerized provider order entries; consumer health IT applications; Electronic Health Records EHR; electronic prescribing; and telehealth. (Grubaough, 2008)

Computerized disease registries which help providers report and track with ease their patients' diseases and impacts on population health. Computerized provider order entries and electronic prescribing add to the providers' ability to improve the patient experience as well as control their own paper trail by typing a few buttons; orders for medicine, referral and/or

procedures/tests can be completed within minutes. Consumer health IT applications allow patients to schedule appointments, communicate electronically with their provider(s), track their health and review their records. Giving consumers/patients access to a version of their health record as well as opening communication facilitates patient empowerment and accountability for their care (Grubaough, 2008).

In 2004, the need to convert medical records to EHRs was recognized nationally with the creation of the Office of the National Coordinator (ONC) of Health Information Technology (IT). Shortly after, EHRs were incorporated into the Health Information Technology for Economic and Clinical Health Act (HITECH) and HIPAA regulations were adjusted to account for electronic protected health information (ePHI) that was being maintained by these EHRs. Today, the EHR is a secure and effective tool for maintaining a patient's healthcare data, for communicating with patients and other providers, and for supporting the patient-physician relationship in a secure format (Bashur, 2016). It is also a much more efficient way to manage health records versus shuffling through paper files, waiting for faxes, or locating paperwork to be able to provide quality care to patients. Further, common data standards can also help providers track basic demographic information and facilitate collaboration between service providers. In addition, many aspects of services integration require the support of system-wide computerized information systems that allow data management and effective tracking of utilization and outcomes (Hilty, 2013)

Telehealth

Services integration programs will involve utilizing various forms of technology, including telehealth services. Telehealth has become a tool that is important in rural healthcare or in those practices that have multiple sites needing access to a behavioral health specialist.

Telehealth is the use of telecommunications and information technology to provide access to: health assessments, diagnoses, interventions, education and consultation information across distance. Telehealth can be a key component of integrated care in rural communities because it connects patients to a range of providers and makes it possible for patients to receive screenings, education, and other services without traveling to a provider's office

There is also growing evidence to support the use of virtual technologies to improve access to care and quality services in behavioral health and social services, particularly with respect to substance abuse and addiction (Bashur, 2016). By using telehealth for counseling and support, mental health providers are able to expand the reach of their services to different populations living in areas where there are limited mental health services.

Telehealth is also a promising approach for creating virtual health homes and team-based approaches to care where mental health, human services, nutrition, and healthcare services are integrated. Further, there are opportunities to use telehealth to integrate behavioral health in the form of a consultation. E-consult can assist the primary care provider comfortable with treating a mental health issue but may want confirmation from a mental health specialist. The use of an e-consult where the primary care provider electronically verifies and/or consults with the mental health specialist and the treatment plan can be in place before the patient leaves the office (Hilty, 2013).

A critical component in the use of telehealth is access to high-speed broadband. Though the majority of communities in the U.S. has access, some rural communities may not have access. Wireless technology is also effective but may not be as dependable in rural areas. In addition, the telehealth field is growing quickly and changing dramatically. Understanding new developments in the technology is critical. In order to use telehealth as an integrative tool, participating

providers and organizations need to adopt the same technology. Implementing new technology and data recording systems can be very expensive and labor intensive. If the entire network cannot support the technology, it may not be possible to fully integrate health and human services. (Bashur, 2016). Finally, telehealth enables the patient to be at the center of care, as opposed to the institution or provider. Therefore, it is important to think outside the box about how to integrate services; it may be possible to provide care within a patient's home, school, or health center.

b. Financing

Successful implementation and maintenance of behavioral health integration have remained elusive tasks for some organizations, often due to a lack of clear pathways for sustainability. The concept of sustainability has inherent complexity and is influenced by numerous factors, none of which are more significant than financing and reimbursement (Davis, 2015). Referenced in much of the literature as a barrier to integration or at least the importance of understanding how the organization will sustain itself is the concept of funding/finances.

Behavioral health integration faces unique challenges for billing and financial sustainability, particularly in fee-for-service environments. While co-located providers have not had major difficulties billing for face-to-face consultations or follow-up visits, they have generally not been reimbursed for their lunchtime question-and-answer sessions, curbside recommendations, electronic/chart review consultations, or efforts in training and supervising other primary care–based behavioral health professionals. Some models of integrated care do not involve licensed professionals providing billable face-to-face services; examples include virtual care of various types and models in which primary care staff (that is, medical assistants) are part of an integrated behavioral health care team. Such practices lead to formidable billing challenges

with payers that stipulate, among other things, face-to-face interaction between the patient and a licensed health care provider (Horvitz-Lennon, 2006).

For these and other reasons, integration efforts have historically been financed through alternate payment models, such as case rates (bundled payments) and time-specified (often per annum) block grants. Some organizations have also received federal, state, or other organizational grants to implement integrated behavioral health care programs, but such grants are often time limited and can be unreliable over time as funding priorities and environments change (Scharf, 2014). Funding in the traditional sense relies on billing, usually insurers for services rendered. However, multiple payers (Medicaid, Medicare, private) with various payment structure and convoluted reimbursement algorithms leaves many organizations without a sustainable source of revenue (Davis, 2015). In recent years, a growing number of Medicaid and commercial insurance payers have begun to initiate fee-for-service reimbursement for behavioral health integration services in an effort to incentivize implementation and sustainability. Medicare notably released G-codes for collaborative care and other integrated care models in early 2017. According to recent documentation from the Centers for Medicare and Medicaid Services and other sources, these codes became CPT (Current Procedural Technology) codes at the start of this year, and an increasing number of commercial payers are expected to provide reimbursement. Unfortunately, as is often expected with the uptake of new billing codes, implementing these new codes for care integration has had its challenges. (McHugh, 2016)

Depending on the specific payer, billing stipulations can make it challenging for health systems to use a new fee-for-service code, even if they have experience furnishing the associated service. In the case of collaborative care, for example, clinics and providers must be able to demonstrate through documentation that all the core components of this evidence-based practice

have been performed, including care management; use of a registry to facilitate measurement-based care; and regular, systematic case review/consultation with a psychiatric provider. They must also be able to keep an accurate inventory of the amount of time that care managers and other team members spend on each patient. The associated documentation requirements can involve substantial workflow, staffing, and electronic medical record changes, all of which can be roadblocks, especially for systems with limited financial resources. For Medicare beneficiaries, additional barriers include the requirements of charging a 20 percent copayment and specifically documenting verbal consent for integrated behavioral health services in primary care.

Some financial implications are mitigating no shows, preparing for increased expense and decrease revenue and non-universal billing codes (McHugh, 2016). Within a fee for service model, increased costs and high no-show rates render integrated BH health financially unsustainable without some form of subsidy. Some approaches to subsidy are utilizing a medical residency program within the organization. This assists two-fold, the money from the hospital residency program as well as workforce. Some health centers have chosen to hire their own staff – subsidizing BH. This provides some on-site services but potentially has fewer connections to care in the community BH system. (McHugh, 2016)

While robust evidence now supports the effectiveness as well as cost-effectiveness of integrated care programs such as collaborative care, the financial viability and sustainability of these services are less clear. Newly available fee-for-service billing codes have both promise and limitations that remain incompletely understood; additional research and expertise in the financing of integrated behavioral health care are needed to implement and scale up these evidence-based programs in diverse primary care settings. Until delivery and payment systems

are reformed, practitioners and health systems will face barriers to providing fully integrated care. (Davis, 2015)

c. Workforce

Integration is consistent with other transformations underway in U.S. healthcare, such as the move toward managing panels of patients with chronic illness, working in health care teams, and using health information technology to better manage patients. As is the case for most of these transformations, much of the currently practicing workforce (both behavioral health and primary care) needs retraining for integrated practice, and there is great need for including these skills in the education and training of new providers. (Skillman, 2016)

The number and type of behavioral health occupations needed to integrate primary care and behavioral health varies depends on many factors: the available workforce, state licensure requirements, the forms of reimbursement and payment for the services, and the model of integration. While the goal of full integration of care in one location is based on considerable evidence for its effectiveness, widespread implementation of this goal will take many years. As a result, behavioral health workforce development efforts should acknowledge the ongoing need to support a variety of integration models across multiple delivery settings. (Skillman, 2016)

The behavioral health workforce has been characterized as being in crisis. (Annapolis Coalition on the Behavioral Health Workforce (2007). Challenges include the aging of some occupations (from which the rates of retirement are increasing), low compensation and perceptions of low status for jobs requiring less formal education, and high burnout and stress rates due to the nature of the work.(SAMHSA, 2013) Additionally, turnover among behavioral health occupations may be higher in rural areas (Gale, 2015) .Ways to foster development of the

behavioral health workforce needed for integration with primary care and consistent with meeting the value-based goals of healthcare's Triple Aim include having sufficient training and education resources (including those that support integrated practice), attractive work environments, and payment systems that support effective workforce teams. Implementation and evaluation of retention programs that examine the root causes of burnout and turnover among behavioral health workers are needed to reduce the number of replacements required. Support for more psychiatric residencies serving rural and underserved communities, as well as behavioral health related clinical training for other health professions (e.g., NP residencies, internships for psychologists) could help to increase the numbers of providers in these occupations. Multiple U.S. Department of Health and Human Services agencies are involved in preparing resources to help develop and provide ongoing support for the integrated workforce. SAMHSA and HRSA have identified core competencies relevant to integration efforts for both the primary care and behavioral health workforce that they suggest could be used to inform training, job descriptions, recruitment, orientation, and employee performance evaluations (Hoge, 2014) These two federal agencies have also identified strategies to address the increasing professional development and continuing education needs of the integrated workforce.(SAMHSA, 2014) In addition, the Academy for Integrating Behavioral Health and Primary Care of the U.S. Agency for Healthcare Research and Quality lists nearly 100 integration-focused training and education programs (AHRQ, 2016).

d. State and Federal Landscape: Politics & Legislation

Legislation was introduced in many states including Pennsylvania to guide integrated care in an effort to assist with payers reimbursing for care. In 2017, a bill was introduced in Pennsylvania House but never moved forward. As recently as 2019, there are multiple legislators looking to integrate based on initiatives at the federal level with goals being varied but including

holistic care especially for those with substance use disorder for continuity of care reasons (Schlossberg, 2019 General Assembly). However, it is important to note that mental health advocates are not always aligned with integrated care. Some of the reasons they cite are concern over losing the behavioral health carve out that allows behavioral health to be segregated for care reasons (MHA-Southwest PA, 2019). Better care is one of the missions of advocates, mental health advocacy agencies are split on the movement to integrate especially where mental health protective language or carve outs are in place. The fear is if mental health care is integrated, the protections will be void. Pennsylvania does not have mental health protective language in place but allows for services to be specialized and separate from physical care.

No matter how cohesive the administration and purchasing of Medicaid physical and behavioral health services, state regulatory policies with respect to licensing, certification, and reimbursement may stymie integration at the provider level (Bachrach, 2014). In states across the country, providers report that "licensing and administration have not kept pace with provider practices," often impeding integrated care. It is not unusual for providers seeking to co-locate physical, mental health, and SUD services to require licenses from multiple agencies, each of which has its own licensing policies and procedures.

From a federal perspective, The Behavioral Health Care Integration Act of 2017(H.R. 2366) would amend the Public Health Service Act to replace a Substance Abuse and Mental Health Services Administration (SAMHSA) program to support demonstration projects for providing integrated health care to certain patient populations with a program to support integration of primary and behavioral health care. The program must be designed to lead to full collaboration between primary care and behavioral health providers in the same facility to ensure support for individuals with mental illness and a physical condition or substance use disorder.

Under the program, grants and cooperative agreements may be awarded to state departments of health, state mental health or addiction agencies, state Medicaid agencies, and health care providers and institutions. Recipients must report to SAMHSA on progress in reducing barriers to integrated care and outcomes for certain patient populations. This bill could potentially have positive impact on integration efforts nationwide, however, after its introduction in the House in May 2017 it has not had much movement (Congress.gov 2019)

b. Conceptual Framework

1. Socioecological Model

This study uses the socioecological model as a framework which emphasizes the linkages and relationships among multiple factors (or determinants) affecting health, including both individual and population-level dimensions. This approach is aimed at understanding how public policy, community, organizational factors, interpersonal processes and individuals all contribute to change as depicted below (Figure 6. WHO, 2005).

Figure 6. Socioecological Model, Source: World Health Organization

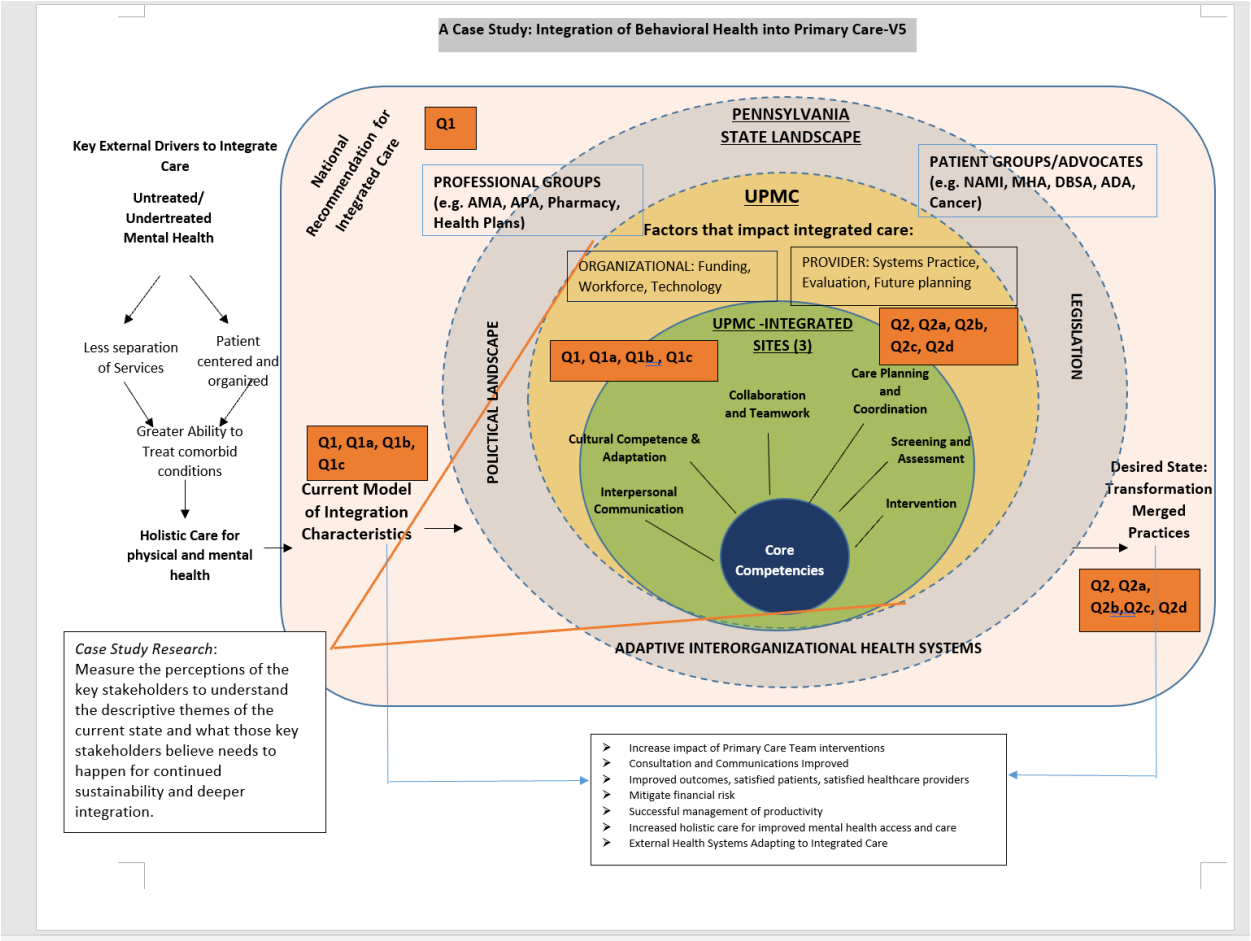
These frameworks helped shape the conceptual model by recognizing that each level plays a part in this research by incorporating key factors and levels that may influence integrated care and progress into a deeper level of integrated care. While the specific focus will be on the organizational level (integrated care practice, the UPMC health system and insurance payers), interpersonal level (leadership, providers and patients) and the individual level (individual providers and patients) all levels have an impact on the integrated practice. The policy level impacts integrated care by the laws, rules and regulations at the regional, state and national level and is acknowledged in conceptual framework but is outside the scope of this research. Similarly, the community level impacts integrated care by the demographics around the integrated practices including mental health disparity of the area and the knowledge that access to behavioral health is available at the integrated practice, again this is outside the scope of the research but is acknowledged in the conceptual framework.

2. Conceptual Framework

The conceptual framework depicts how this case fits into the larger picture of a national initiative for integrated behavioral health care. It is comprised of the major areas, including the national focus on integrated care, Pennsylvania landscape, organizational factors and provider factors within UPMC health system, the UPMC primary care integrated sites, and core competencies of individuals and sites for integrated care (Figure 7). These factors were identified based on the literature identifying the levels of integrated care, the implementation characteristics within those levels of integration and documents review of UPMCs basis for integration. The primary focus for this study is UPMC-St. Margaret's three primary care integrated clinics which is depicted by the "cone of study" within the framework. The conceptual framework includes the specific factors and the potential impacts on the level of integrated care at UPMC-St. Margaret's and how that may influence the progress into a deeper level of integration.

This conceptual model emphasized the role of organizational influences on the internal integrated care sites, including the *organizational factors* and the *provider factors,* as well as the *core competencies* serving as the potential means that the sites adapted their practices. The *core competencies* are derived from the SAMHSA model and are listed within the UPMC integrated sites section. The *core competencies* provided the constructs recognized as key factors within integrated care practices and provided guidance for which the research focused on how specifically these constructs impact integrated care. This study sought to identify the ways in which the larger health system, the providers and leadership approach impacts this process.

Figure7. Conceptual Framework



3. Logic Model

The logic model is a graphic depiction (Appendix 1-Orignial Logic Model) that presents the shared relationships among the resources, activities, outputs, outcomes, and impact for UPMC integrated practice. It depicts a type of road map for the relationship between UPMC integrated practice and the activities and the intended effects. The logic model is based on the literature as well as early information gathered during the environmental scan with the UPMC practice. The logic model shows the areas identified by UMPC clinic as the needs and context for integrating

care: the untreated and undertreated behavioral health issues, overlap of behavioral health and physical health chronic conditions, primary care is a service hub, disparities that exist in the area for behavioral health availability and the geographical location of the practices. The contextual factors include those based on the literature; patient need strategy (using the four-quadrant model), practice strategy using the SAMHSA model, and identified successes from the early work documented at UPMC.

The strategies, inputs and activities within the logic model are again based on literature and cross referenced with the information provided by UPMC clinic: inputs and activities such as huddle team meetings and communication and collaboration were drawn from the UPMC clinic itself based on discussions. The strategies were drawn from a combination of the literature and while the information also includes that from UPMC the language that is referenced is from the literature primarily.

Finally, the outcomes, short-, intermediate-, and long-term were assumptions drawn from the literature for those possible outcomes from the inputs and activities occurring at UPMC integrated care. The outcomes include modifications to the practice but also include changes that will need to occur outside of the practice in the larger scope of the state and national forum and provides the ideal state of fully transformed practice.

III. STUDY DESIGN, DATA, AND METHODS

a. Research Design and Analytic Approach

1. Introduction

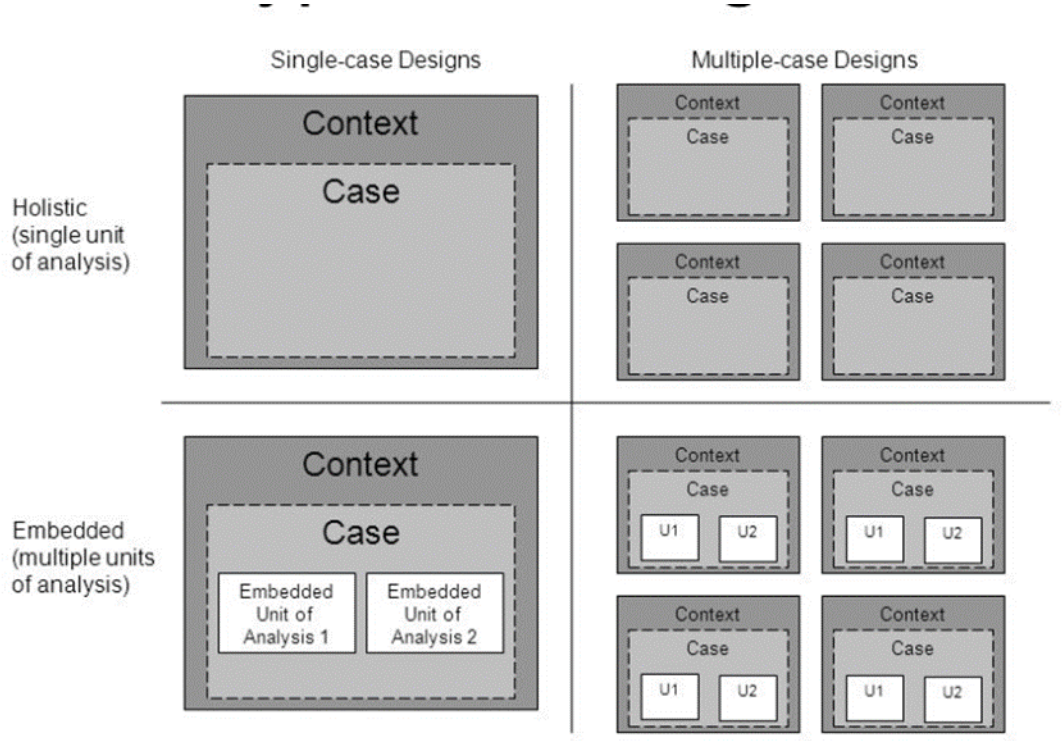
This was an exploratory study of an exemplar case study using qualitative methods to evaluate stakeholder perceptions of progress of integrated care to identify pathways that will aid in long term sustainability for continued integration of behavioral health in primary care. In this exploratory case study, three methods were employed with UPMC staff and providers only: 1) document reviews of relevant program materials (no participant involvement) and literature reviews to cross walk the data to inform the logic model and focus group guides, 2) a focus group to include team leaders from the three integrated sites to help inform the logic model framework revisions which in turn provided insight to the key informant interview guide questions and 3) semi-structured key informant interviews, during which participants were engaged for approximately 45-60 minutes. The preference was for in person interviews with the fallback position of phone interviews if in-person wsa not possible due to logistic constraints.

2. Case Study Research Characteristics

The research design was dictated, in part, by the research questions. According to Yin (2009), a case study research design is a proper design when the research question is the form of "how" or "why". In this study, a single exemplar case study with embedded units of analysis allowed for greater understanding of contextual factors that influence progress of integration of three clinics within one health system. This was an exploratory case study which is used "when the researcher has little control over the events and when the focus is on a contemporary phenomenon within some real-life context" (Yin, 2009).

Yin (2009) defines a case study as "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomena and context are not clearly evident". Because this study's aim was to discover the experiences and understanding of behavioral health integration within the treatment team which includes various departments within the clinic and provided varied experiences in relation to the process and progress of integration, a case study approach was an appropriate research design for this study. The figure below provides a graphic interpretation from Yin as an expert in case study research and shows the basic types of designs for case studies.

Figure 8. Source: Case Study Research and Applications, Yin (2009)



The case study design for this research was a holistic single-case study (Figure 8.) The case is the UPMC integrated practice and the unit of analysis is the perceptions of the individuals within the integrated practice. This case study used an explicit study protocol linking the research

questions to the topics being studied which examined the patterns and themes across documents (internal documents provided by the case), a focus group and semi-structured interviews with individuals within the UPMC integrated practice. The patterns and emerging themes across the data sources were used to triangulate the data collected and analyzed.

3. General Exemplar Description

According to Yin (2009) an exemplar case has five general characteristics 1) the case study must be significant; likely to be a case that is unusual an of general public interest, nationally important (or both), 2) the case study must be complete; including setting boundaries an exhaustive effort to collect relevant evidence and a design that takes into account time constraints, 3) the case study must consider different or alternative perspectives, 4) the case study must display sufficient evidence by judiciously and effectively presents how the research was conducted and data collected and interpreted, and 5) the case study must be composed in an engaging manner with a clarity and enthusiasm (Yin, 2009).

4. Case Exemplar Characteristics

In this study, the case or main unit of analysis is the perceptions of the integration *process* used by UPMC in the development of their framework for integration of behavioral health into primary care. This case represents an Exemplar (critical) Single Case study because UPMC represents a significant contribution to knowledge and the practice of integration by "confirming, challenging and extending the goals" (Yin, 2009) of integration. Additionally, this case represents an example of general public interest (community), the underlying issues are of national importance (SAMSHA has made recommendations for integration, more and more legislation is looking into integrated healthcare as a way to ease the burden of resource allocation). The

embedded units are the sites within the UPMC system. Because the context in which these sites were chosen are the same (single health system family practice clinics), this case study is designed as a single case study rather than a multiple case study design.

The defined boundaries for the study will include only the UPMC integrated clinics (3) in the Pittsburgh area and will include a specific time of interviews with key informants. It will be a snapshot of current conditions as well as themes for advancing to desired conditions.

As described earlier in Chapter 1, the integrated care of UPMC St. Margaret's Family Health Clinic has been working within the integrated model of care for over a decade to address the gaps in care. Having shown early promise in addressing an underserved area of Pittsburgh, the integrated health model has since been implemented in two other family health clinics in the UMPC system for a total of three integrated health clinics.

The case selected is based at the University of Pittsburgh Medical Center Health Center located in Pittsburgh, Pennsylvania. The three family practice clinics that have integrated behavioral health are located in three suburban towns located within the greater Pittsburgh area; New Kensington, Lawrenceville and Bloomfield-Garfield. This health system was selected as the focus because of their established practice of integration of over a decade. The clinics vary slightly by patient case load but are relative to the neighborhoods in which they housed and includes lower socioeconomic populations where transportation and other resources are limited including healthcare access.

The leadership and individuals who are part of the resources that make up the integrated system of healthcare and their experiences shape the long-term progress. A qualitative research design provides the best methodology necessary for exploration and discovery while allowing for

flexibility to build upon the personal dynamics that make up the framework. The framework is reflected in the conceptual model for this study and is comprised of key constructs associated with integration of behavioral health into primary care supported by the literature. The conceptual framework helps provide both context and support for the main research questions of this study; and helps guard against construct validity issues in this exploratory study. The concepts will also serve as the basis for deductive coding for interviews and relevant documents. Findings from the content analysis of the documents will be triangulated with the interviews. Triangulation will be used to help support the validity of the findings from the interviews to complement findings as well as identify areas of divergence.

5. Research Setting and Context

This study took place in Pittsburgh, Pennsylvania which is located at the far west end of Pennsylvania near the border of the state of Ohio and West Virginia. It has approximately 320,000 residents and is second largest city in Pennsylvania. The sites of the clinics are in neighborhoods of Pittsburgh: New Kensington, Bloomfield-Garfield and Lawrenceville located. Each of the sites has its own patient case load (Appendix 3-Patient Case Load UPMC-St. Margaret's) and specifics around interview and focus group selection and description can be found in the sections below for data sources and data collection (and in Table 3- Key Informant Interview Roles and Perspectives).

b. Data Sources, Data Collection and Management

1. Data Sources:

i. Literature Review

A web search of public records using the following search terms was conducted: Integrated Behavioral Health into Primary Care, Mental Health integration, Primary Care integration, Models for Integration of Behavioral health, Integration sustainability, Implementation of Integration, Factors effecting integration, Evaluation of Integration, Qualities of Integration.

Integration of behavioral health key objectives guiding the literature review are as follows: a) Identify and describe the different models of integration, identify and describe competencies of integrated practice, patient survey templates, provider survey templates, strategic plans and activities conducted by UPMC family medicine clinics, b) Document and list specific strategies and/or key findings acknowledged in presentations, reports, articles, surveys, and websites of organizations with guiding ideas and recommendations for integration (SAMHSA, NIMH, NIH).

The common themes identified were entered into an excel spreadsheet to visually demonstrate the key ideas found.

ii. Document Review

The documents that were reviewed helped to inform the logic model and the focus group guide using themes that emerged regarding what is most important to the organization as well as to address the research questions. Specifically, the documents that were analyzed for content include: There was a total of seven documents provided by UPMC-St. Margaret's: 1) The

Implementation of an Integrated Behavioral/Physical Health Program at the UMPC St. Margaret Family Health Centers Funding Proposal (2010); 2) Integrating Behavioral Health into Primary Care: Real World Applications (2018); 3) Integrating Behavioral and Physical Health in a Residency Family Health Center -Poster Presentation (2013); 4) Integrated Behavioral Health at Family Medicine Residency-Presentation (2013); 5) Lifestyle Questionnaire tier 1 screening form; 6) PHQ-9-standard form for screening; 7) Survey Data: Provider Perceptions St. Margaret's UPMC (2013). 1) Mental Health America Convention presentation 2012, 2) grant proposal, 3) secondary survey data 2012, 4) "All Together" presentation 2014, 5) "Strategies for Implementation Data Set" secondary data. Together these documents help to frame themes that are most important to UPMC-St. Margaret's organization and inform the logic model and focus group guide.

Key objectives guiding documentation review were as follows: a) Collect multiple data sources to enable triangulation of data. b) Use the data collection protocol to assist in identifying relevant information for answering the research questions, c) Document background, context, and progress integration within UPMC using the key constructs of integration sustainability and implementation being studied.

iii. Focus Group:

Purposeful sampling was used to identify focus group participants that have extensive knowledge in how integration at UPMC operates by way of their role at the clinics and should include individuals who have working knowledge of the journey of UPMC integration operations. The focus group was held as one session at one of the site locations. Since the purpose of the focus group was to help revise the logic model as well as shape the interview guide questions the group included those most familiar with the integration at UPMC. Specifically,

those in leadership, case management and clinical positions such as Nurse Managers (leadership), Social Workers (case management and behavioral health perspective), Nurses (clinical), Medical Doctors (clinical, leadership, primary care perspective).

The focus group was conducted to identify alignment and/or gaps between participant perceptions of how integrated care at UPMC operates in practice and the logic model that was developed by the researcher using the literature, grant proposal and the presentation at Mental Health America symposium documents (Appendix 1: Original Logic Model). The focus group was used to test the logic model as a way to be concrete for the focus group participation.

iv. Key Informant Interviews:

A key informant interview guide containing 22 questions was used to guide semi-structured interviews with UPMC clinic treatment team members and staff. The interview guide was an adaptation of publicly available instruments used for interviewing as well as the researchers own questions to explore the process of integration specific to UPMC including factors contributing to both successes and challenges of integration, questions about perceptions on how to continue to move forward with integration, finally lessons learned and perceptions on next steps. The interview questions explored themes and directive outcomes from the focus group results.

Finally, the interview guide questions were provided to all interviewees prior to the interview so that the participant understood the flow of the interview and had time to think about things they wanted to discuss.

v. Field Notes and Memos

Field notes were collected as the researcher met informally with and/or spoke on the phone with key contacts at UPMC. Field notes were collected throughout each component of the study process including the collection and review of documents, the completion of the key informant interviews and throughout the analysis phase. Field notes were kept in a notebook where they were transferred to a Word document kept on the University of Illinois at Chicago secured password protected Box account drive. The notes included reflections on the process, researcher reactions and feelings, biases, and interpretations throughout the study. Memos were incorporated as part of the researcher process and included reflections and summary captures from meetings with committee chair, learning community, and ideas generated throughout the dissertation process. Memos were written free hand in a notebook then typed up and kept in a word document. The notes and memos were included as part of the overall research process and were captured in excel. No part of any of the data was linked to the identity of the interviewees.

2. Data Collection

For this study, the research was conducted in three phases: phase one of data collection was the document review to inform the focus group and interview questions. During the second phase, the data collected were the outcomes from the focus group at the UPMC clinic to inform the logic model revisions and the key informant interview guide questions. The third phase was to collect data from the key informant interviews to answer the research questions. The focus group was conducted during the August-September 2019 timeframe at the UPMC Lawrenceville site (most centrally located between the three sites) and the purpose was twofold; a) review the current version of the logic model and inform revisions to the logic model. This validated the rigor of the research-based approach; b) validate the questions for the interview guide. During

the third phase, complementary qualitative data was collected from semi-structured key informant interviews, documents, field notes and memos written in order to answer the main research questions as well as the sub-research questions (Table 1-Activities Table).

Phase I: A document review included: 1) The Implementation of an Integrated Behavioral/Physical Health Program at the UMPC St. Margaret Family Health Centers Funding Proposal (2010); 2) Integrating Behavioral Health into Primary Care: Real World Applications (2018); 3) Integrating Behavioral and Physical Health in a Residency Family Health Center - Poster Presentation (2013); 4) Integrated Behavioral Health at Family Medicine Residency-Presentation (2013); 5) Lifestyle Questionnaire tier 1 screening form; 6) PHQ-9-standard form for screening; 7) Survey Data: Provider Perceptions St. Margaret's UPMC (2013). Together these documents help to frame themes that are most important to UPMC-St. Margaret's organization and inform the logic model and focus group guide. The researcher primarily scanned the documents in an environmental scan approach to determine the "buckets". The patterns were scanned and then put into "big bucket" a-priori constructs gleaned from the literature (Appendix 9-A-Priori Constructs). Then a systematic review of the documents was conducted until data saturation was achieved. The data was then systematically collected, documented, analyzed, interpreted and organized. The data was manually coded for patterns and then manually input into an excel spreadsheet; if the document provided content aligning with the constructs it was input into the table, if it was interpreted to not contain aligned content that cell was left blank. The patterns were then synthesized into emerging themes and constructs and then evaluated (Appendix 10) to create the logic model (Appendix 1). Additionally, the content analysis themes and constructs helped to answer research question 1 as well as inform probing and coding for the focus group and interviews using those areas most relevant to the research.

Further, the content analysis helped inform by providing insight into the culture of the practice itself by revealing those constructs, items and ideas that were most relevant to the individuals within the practice.

Phase II: A focus group was moderated by the researcher using a focus group guide (Appendix 6). The focus group discussions were recorded and reviewed for any details lost during the process. The focus group guide had 16 questions that were put into three main categories: probing questions (to introduce the group to the topic of the logic model discussion and help participants to feel comfortable in sharing their opinion with the group), follow-up questions (to delve deeper into the logic model discussion and the opinions) and exit question (to ensure nothing was missed). Additionally, certain descriptive demographics of the group will be collected such as roles and tenure. The focus group session lasted approximately 60-90 minutes and took place at the Lawrenceville site as this site has a large conference room and is convenient to participants. The researcher/moderator ensured that all participants were comfortable and engaged throughout the process using various techniques to manage dominant participants, eliciting information from shy participants and taking care to clarify comments. Approximately 10-15 minutes prior to beginning the moderator ensured that technologies were working properly, and photocopies of the logic model to be discussed were ready to be distributed. Once all participants of the focus group arrived, the moderator provided a brief introduction and requested the participants consent to participate, take notes and audio-recorded the focus group. The researcher then captured the results making notes and securing the notes and audio recordings to a secure password protected site. The results of the focus group were then transcribed and uploaded into the qualitative software MAX QDA to later be analyzed and used to revise the

logic model by the researcher (Appendix 11). The finalized logic model informed and refined the key informant interview guide.

Phase III: Interviews were conducted by the researcher/interviewer using a semi-structured interview guide. Interviews were audio recorded and then transcribed. An interview guide of 22 open ended questions was used to guide the interview (Appendix 7). The interviews were conducted in a private office with the researcher and the key informant only. When face to face interviews were not possible due to schedule conflicts or other reasons, an alternative phone interview was scheduled. The interview questions were provided to the interviewee prior to the formal interview to assist in preparation and to make the most of our limited time. The interviewer arrived at the interview approximately 5 minutes prior to set up and ensured that technologies were working properly. Once the interviewee arrived, the interview began. The interviewer began with a brief introduction and requested the participant's consent to participate, take notes, and audio-record the interview. Once consent was received, the interview began and lasted for approximately 45-60 minutes. At the end of the interview, the interviewer thanked the informant for his or her participation and answered any questions the informant had at that time. Then, the researcher completed writing interview notes and saved the audio recording to a secure, password-protected site to be analyzed later. The results of the interview were to provide insights into the perceptions about the UPMC integrated practice in order to answer the research questions.

Table I. Activities Table

AIM	ACTIVITY
Better understand the current state of integration at UPMC a	1-Conduct document analysis of grant proposal, strategic plans, survey results, poster presentation 1a-Inform the aim of research, research questions and problem statement. Inform the refinement of the logic model 2-Conduct a focus group with providers and leadership with representatives from each of the three integrated sites. 2a-Refine the logic model to better reflect the activities and aim of the key informant interviews 2b-Confrim and validate the members to be chose for the key informant interviews 2c. Develop key informant interview guide questions
Learn how UPMC current state of integration and capture perceptions of facilitators and barriers to next level integration	1-Conduct key informant interviews with selected members from the huddle group likely those who are part of the integrated treatment team and have been part of the organization for at least one year but the longer the better preferably 2-Use thematic analysis to explore the key factors impacting integrated behavioral health into primary care 3-Use thematic analysis to explore commonalities and differences among the literature, document reviews and interviews. 4-Use thematic analysis to explore the barriers and facilitators, what is working and what has not for UPMC integrated care
Provide key findings and present recommendations to UPMC for further evaluation	1-Present the key findings to the leadership team at UPMC 2-Use a member check approach to validate and confirm key findings and develop recommendations for UPMC next steps. 3-Present final dissertation with UPMC leadership team.

Data collection took place during the August-September 2019 timeframe and was based on the dynamics and availability of the participants at the clinics and was in full compliance with

the Institutional Review Board (IRB) requirements at the University of Illinois at Chicago and the University of Pittsburgh Medical Center (UPMC) Health System IRB.

Informed Consent for Focus Group and Interviews

Participants informally agreed to participate in the research by responding to the initial correspondence requesting their participation and scheduled a time for the focus group and then responding to the request to schedule time for interviews. At the beginning of each interview, the interviewer requested 1) the participant's consent to participate, 2) have the conversation audio-recorded, and 3) have their responses associated with their name or role in the case study site. Participation was voluntary and the participant could've withdrawn from the study at any time.

If participants requested anonymity regarding item 3, including in the attribution of quotes, at the beginning or at any time during the interview, the interview, or portion of the interview, was kept confidential. No identifying information was included for the entirety or portion of the interview, per the request of the participant. Audio recordings and transcripts were de-identified accordingly and destroyed at the end of the evaluation study.

Semi-Structured Key Informant Interviews and Selection Criteria:

Interviews were conducted with individuals that included at least one representative from each department which made up the treatment team (huddle group) to provide different perspectives (Table 2 – Key Informants and Perspectives) from within the same site, across the three sites, within the larger health system, within the same patient cases and across the patient cases: Nursing, Social Work, Physicians, Pharmacy. Key informants were those individuals that have been with the practice the longest; some since the inception of integration but at least for five years. Specifically, interviews included the one Psychiatrist that covers all three sites, a

Medical Director; and Dr. Hahn and Jim Mercuri, LCSW as the original leaders who spearheaded the integration approach. The Psychiatrist provided a unique perspective as the only medical doctor specializing in Psychiatry and helped shape the understanding of her role in managing the spectrum of the behavioral health issues. The Medical Director offered a leadership perspective as well as the clinical practice perspective. Dr. Hahn has the unique perspective of being involved since the inception of the integrated care at UPMC and helped the researcher understand the journey. Additionally, the family resident physician provided the perspective from both the residency program perspective and that of a primary care physician in the integrated practice. The social workers offered their perspective from the behavioral health side and the case manager perspective. Individuals part of the frontline case management of the patients provided key insights to the process, progress and their own individual perceptions of integrated care at UPMC. Inclusion of staff such as the front desk/scheduler provided further perspective for the integrated practice who is not a provider.

Table II. Key Informant Interviews: Roles and Perspectives

ROLE (Total 13 possible) (Actual 8)	PERSPECTIVE (Insights)
Medical Director (2) 1 completed, 1 declined	Leadership: across the sites, within the specific site, within the health system Clinical: Within the site, across the sites, primary care
Dr. McGuire- Psychiatrist (1) -covers all three sites 1 completed	Leadership: across the sites, within the specific site, within the health system Clinical: Across the sites, within the site, behavioral health
Family Medicine Resident Physicians (1) 1 completed	Clinical: Within the site, across the sites, within the health system, primary care
Nurses Managers (3) 0 Completed	Clinical: Within the site, across the sites, primary care
Social Worker/Case Management (3) 2 completed (Prog Director, Prog Mgr) 1 declined	Leadership: Within the site Clinical: Behavioral Health, primary care, within the site, across the sites
Pharmacist (1) 1 completed	Clinical: within the site, across the sites, within the greater health system
Dr. Johnathon Han (1) (Also serves as Medical Director for one site) 1-completed	Leadership: Innovation, within the site, across the sites, within the health system, outside the health system Clinical: Within the site, across the sites, within the health system, primary care, behavioral health
Front Desk/Scheduler (1) 1 completed	Leadership: Administrative, within the site, within the health system, outside the health system

3. Data Management

Data was tracked and organized in one of several ways. First, all documents collected were placed into a Microsoft Word folder on a secure password protected laptop and secure UIC Box account. The multiple areas of storage were to eliminate the possibility of losing important information. Documents throughout the process were categorized in the folders based on subject

matter or origin of the documents. For example, UPMC documents were in a separate folder from literature, memos, and interviews. As the process continued, the data was moved into categories or subcategories. For interviews, an audio recording application was used to aid in the transcription process and that data was kept first on the recording device and then uploaded to a folder for recordings with the transcripts. Sub folders were created to keep the data further categorized by type. The data from the literature review was also kept in RefWorks as part of the referencing and citing source allocation within UIC.

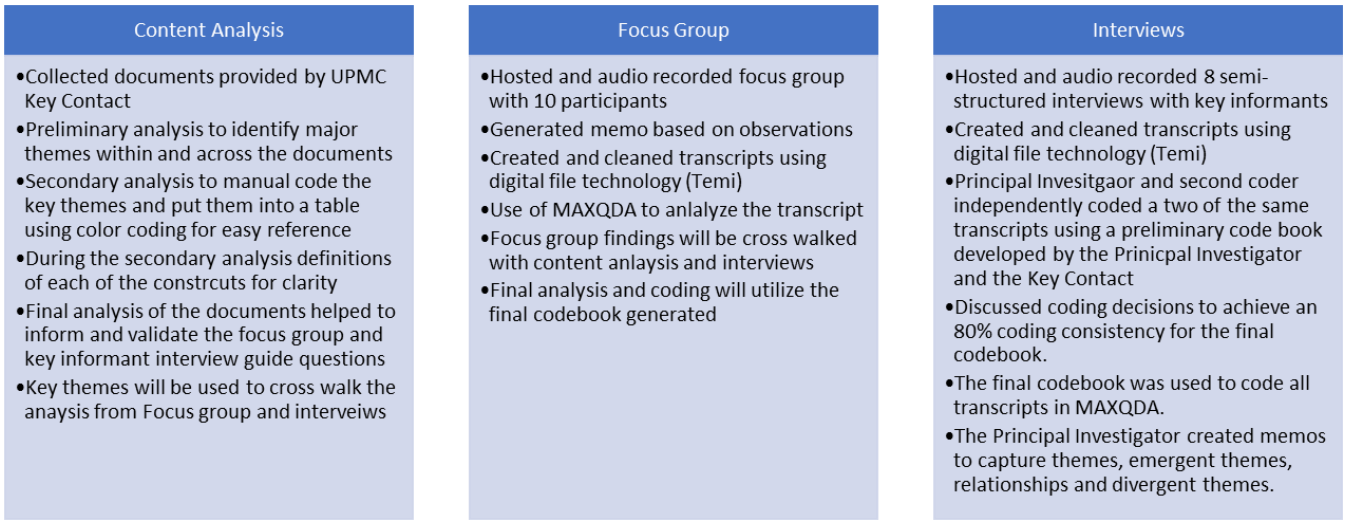
4. Data Analysis

Data was stored on a secure password protected UIC Box account and secure password protected laptop. The audio recordings were transcribed and cleaned. The researcher developed a codebook and coded the interviews. Further refinements to the codebook were made as needed based on consultation with UIC review committee chairperson (Appendix 8-Codebook). A thematic analysis was conducted using the software MAXQDA, focused on identifying factors, facilitators, and barriers that contributed to integrated care at the case study sites. The researcher and UPMC main contact met to discuss any discrepancies, questions, and emerging themes or concepts. The data was synthesized into key findings with supporting quotations. Audio-recordings and transcripts were destroyed upon completion of the study. Data analysis was conducted in an interactive fashion occurring simultaneously with data collection. The data was captured then condensed by summarizing, coding and eliminating erroneous information. Data was then categorized by pattern matching across interviews, documents and literature. This aided in identifying themes as well as differing perceptions to then draw conclusions. Finally, the data was used to develop and make recommendations. Systematic Reflection was used to build on the data collected and aided in the development of recommendations.

Analysis Process

The researcher followed a structured set of analysis steps for the content analysis, the focus group and the semi-structured interview (Figure 9). In support of this process, the researcher developed both a priori codebook and measurement table (Appendix 2-Measurement Table) based upon exploratory discussions with UPMC-St. Margaret's key contact and literature review findings. This intel and content analysis findings were utilized to support the creation of a semi-structured interview guide that was in alignment with stated research questions and offered capabilities to capture a comprehensive spectrum of key themes. Collectively, these critical steps laid the foundation for data collection activities and analysis.

Figure 9. Process Steps



The methodology changed slightly based on the reality of the data collection: availability of the study participants, timing of interviews and geographical location to the researcher. Originally the three phases (1-content analysis, 2-focus group 3-interviews) were designed for one to inform the next phase sequentially. The change is specific to the focus group and key

informant interviews where they took place simultaneously and have been combined into one phase of data collection “Phase II”.

Upon the completion of the eight audio-recorded, semi-structured interviews with UPMC-St. Margaret’s participants and development of researcher generated memos, the researcher utilized digital software (Temi) to transcribe the audio files. All transcriptions were thoroughly reviewed and cleaned by the researcher. This process entailed conducting a comparison between the written transcript and audio files, while making changes to the transcript to ensure alignment across both.

The researcher completed a preliminary round of manual, “big bucket” coding, using two transcripts to get a sense of the data and inform changes to be made to the codebook. In August 2019, preliminary findings were discussed with the key UPMC contact to gather insight and confirm the initial code buckets. The codebook and the two transcripts were provided to a second coder to independently code and then discuss with the researcher. Findings from discussions around coding decisions between both researchers yielded in 80% consistency and recommendations for the final codebook (Appendix 8- Codebook).

The researcher uploaded and coded all transcripts in MAX QDA using the final codebook and developed additional memos to capture emerging themes, and potential relationships. MAX QDA tools such as code sets, segment retrieval, and comparing groups by code were used to support the analysis process. The tool “code sets” allows the researcher to group the same code in different ways for example the code “vision” was grouped with “vision v. reality”, “characteristics” and “definition” in order to see the relationship between how the participants were describing and defining the characteristics of integrated care and how that related to the vision and reality of integrated care. Segment retrieval allows the researcher to view and analyze the assigned codes across and within documents for example, activating the code “barriers” while

activating one or more documents, all the segments with this code (and if desired then also the sub-codes") then appear in a new window to visually to see what the participants describing as "barriers".

In order to understand the frequency of codes; using the analysis tool "compare groups by code" while also highlighting the quoted text that matched the codes from each transcript. The frequency tables and charts helped to highlight the frequency of codes across and within the transcripts; as well as codes being placed in ranking order. The researcher was able to start at the top of the report and review findings connected to each code in support of elevating patterns. The co-occurrence function served as a tool for identifying potential associations between codes. In instances were associations were highlighted, the researcher examined respective transcripts to gain an understanding of context that could explain the nature of such associations. For example, the code "facilitators" allowed all segments that were coded as "facilitators" to be put together and compare each transcript to each other. Documents entitled transcripts 1-8 were compared to each other seeing what each participant described as "strength". This allowed the researcher to understand what key ideas emerged as "strengths"; further the sub codes were also able to be analyzed in this way. For example, the sub code "residency program" was referenced by several participants in different ways and why they felt it was a facilitator. Finally, this tool showed the researcher where although the sub code" residency program" was referenced and coded under gaps, after analyzing that some participants also felt it may be a "gap" due to how the residency program is three years and the residents generally move on from the practice and their patient cases.

MAXQDA Maps were then created to serve as the visual representation of these associations and helped to expand the researcher's thinking about potential explanations behind "the why".

Once analysis of all transcripts was completed and themes were identified, the researcher compared study findings to the logic model to confirm alignment and/or identify gaps. Missing elements in the logic model were added to the final model to ensure an accurate depiction of UPMC operations, it's aims, and associated outcomes. Cross analysis of the data was then used identify the commonalities and differences among the data sources.

Lastly, the researcher conducted a member check discussion of the findings to the integrated care team at UPMC-St. Margaret's to develop recommendations to address findings.

c. Validity Considerations

1. *Internal Validity*: My personal experiences could create "researcher bias" which could impact data collection and analysis. However, I am interested in the perceptions of others and the different experiences from those experts in this case study. Further will be from a-priori codes 1) from the focus group and logic model and literature that inform your interviews. 2)Having a developed interview guide with specific questions and potential probes in advance assures internal validity and 3) I will use Jim Mercuri (UPMC) as a second coder to support internal validity.

2. Construct Validity: The constructs are established and defined from multiple sources including the document review, literature and the research questions. They are validated through the focus group and logic model.

3. External Validity: As an exemplar case, key learnings from this case will inform integration in other sites from a transferability perspective. To the extent that the findings are highly contextual to UPMC, the transferability may be limited.

4. Reliability: The data will be collected in a meticulous and transparent manner and will be conducted through a fixed design and process. Further, all procedures and methods will be as explicit as possible.

5. Limitations: As an exemplar case based on longevity of practice, the limitation of recall bias from the interviewees must be considered; providing the interview questions prior to the interview may allow subjects to reflect in a less structured and timed environment; potentially allowing for more details to be remembered. As an "outsider" of the organization this will limit my ability to build trust and geographical location will limit number of times for face to face interviews. I will be cognizant of my limitations and take care to explain both verbally and in writing.

As an exploratory case, some of the findings may be emerging or new ideas and not necessarily have other cases with which to be compared.

IV. RESULTS

This study sought to explore aspects of integrating behavioral health into primary care at University of Pittsburgh Medical Center(UPMC) -St. Margaret's Family Health Clinic and the factors that impact integrating care within this health system to best support overall patient health care. This research was conducted using an exemplar case study design and exploratory qualitative methodology.

a. Study Design and Data Collection

This research is a two-phased method design including a content analysis and primary qualitative data collection. Phase I of the assessment included a content analysis of internal documents from UPMC/St. Margaret's Family Health Clinic to identify baseline themes of what this practice deemed important to integrating behavioral health care. The documents provide insights to frame the focus group and key informant interviews. Phase II involved primary qualitative data collection from the focus group and the key informant interviews based on themes found in the content analysis to undertake a more in depth understanding of the characteristics of integrated behavioral health care from the stakeholder perspectives. Table 3 provides a summary of data collection by phase. The study was led by the principal investigator, the DrPH doctoral candidate and was responsible for the data collection and analyses. The study was deemed exempt by the Institutional Review Board at the University (#2019-0696). Table 3 is a summary of the data by Phase.

Table III. Behavioral Health Integration into Primary Care: A Case Study Overview Data Sources and Use

BH Integration Assessment Phase	Data Source	Total Number
Phase I: Content analysis of internal documents to identify themes around behavioral health integration into primary care important characteristics, descriptions, core competencies	UPMC/St. Margaret's internal documents	N= 7
Phase II: Primary qualitative data collection to explore behavioral health into primary care themes more in depth and identify key characteristics of an exemplar case	One focus group with team members from the 3 sites in various roles (Program Mgr, PharmD, Social Workers, Nurse Managers, Billing)	N = 8
	Key informant interviews with key roles from the 3 sites	N = 8
	Total primary data collection participants	N = 16

This chapter provides an in-depth description of data collection and analysis efforts, associated outcomes, and a summation of study findings categorized by the following stated research questions:

Q1. What are the stakeholder perceptions of the key characteristics of the current state of integration at University of Pittsburgh Medical Center/St. Margret's Family Health Clinics (UPMC)?

Q1a.How is integration at UPMC perceived and defined by UPMC staff?

Q1b.What are the strengths and gaps with the current level of integration?

Q2. How does the original vision of integration compare with actual integration at UPMC?

Q3. What are the perceived facilitators and barriers of the UPMC integrated care journey?

Q4. What is the process of documenting lessons learned?

Q5. What are the stakeholder perceptions for what actions need to be taken to move to a deeper level of integration?

1. Phase I: Content Analysis of Documents

Seven main documents from UPMC-St. Margaret's including presentations, grant request and internal reports were reviewed to capture major themes regarding integrated care mission, challenges, key learnings and important topics to UPMC-St. Margaret's. Some of the important topics that were requested by the researcher were: documents describing key features of this integrated care practice, the vision for integration, and items that provided insight to challenges and how those were addressed. Additionally, the researcher requested documents that could provide understanding of what the practice felt was important and possibly unique to this practice for the purpose of research. This approach allowed for some flexibility to allow for the practice members to provide what they felt was important for the researcher to know versus what the research felt was important. In the fall of 2018, the key contact at UPMC-St. Margaret's along with the Medical Director and Program Manager provided the documents. There was a total of seven documents provided by UPMC-St. Margaret's: 1) The Implementation of an Integrated Behavioral/Physical Health Program at the UMPC St. Margaret Family Heath Centers Funding Proposal (2010); 2) Integrating Behavioral Health into Primary Care: Real World Applications (2018); 3) Integrating Behavioral and Physical Health in a Residency Family Health Center - Poster Presentation (2013); 4) Integrated Behavioral Health at Family Medicine Residency-Presentation (2013); 5) Lifestyle Questionnaire tier 1 screening form; 6) PHQ-9-standard form for screening; 7) Survey Data: Provider Perceptions St. Margaret's UPMC (2013). Of the seven documents, three documents provided robust information and were rich in documentation to

answer the research questions (The Implementation of an Integrated Behavioral/Physical Health Program at the UMPC St. Margaret Family Health Centers Funding Proposal (2010), Integrating Behavioral Health into Primary Care: Real World Applications (2018), Integrating Behavioral and Physical Health in a Residency Family Health Center -Poster Presentation (2013)). The Researcher primarily scanned the documents using several rounds until saturation. The data was manually coded for patterns and then manually input into an excel spreadsheet. The patterns were scanned and then put into "big bucket" a-priori constructs gleaned from the literature (Appendix 9-A-Priori Constructs).

After the constructs were recorded, the documents were scanned again for the key themes that related to the a-priori constructs and were related to defining/describing integrated care, outcomes and goals, process and techniques and sustainability factors that were important to the key internal stakeholders into a table and recorded in an excel spreadsheet (Appendix 10-Content Analysis).

2. Phase II Primary Qualitative Data Collection and Analysis

Qualitative data were collected through a focus group and key informant interviews from August-September 2019. Focus group participants were invited based on the recommendation of the key contact at UPMC-St. Margaret's representing tenure and role within the integrated care at UPMC-St. Margaret's. A total of eight individuals participated in the focus group which included the following: social worker (3), Nurse Manager (2), Biller/Billing Dept (1), Pharmacist (1) and a nurse (1) and all three sites were represented.

Eligible key informants were also identified by the key contact at UPMC-St. Margaret's and included medical directors, primary care physicians, social workers, pharmacists and the

psychiatrist. The focus group and interview guides were developed by the Principal Investigator based on Phase I themes and examples of other interview guides. The focus group and interviews were conducted by the Principal Investigator. A total of eight individuals participated in the interviews which represents a 60% participation rate. The key informant interview participants were made up of the following: front desk (1), Medical Director (2), Program Director (1), Program Manager (1), Pharmacist (1), Psychiatrist (1), Primary Care Provider (1). Two potential participants chose not to participate with no further explanation; two potential participants had scheduling issues and even after accommodation and rescheduling finally declined; and one potential participant did not respond to the initial email invitation or follow up emails.

Focus groups and interviews were recorded (with permission), and transcribed. A thematic codebook was developed by the Principal Investigator based on Phase I results and preliminary review of the transcripts. The use of a second coder for coding agreement and reliability was implemented and she coded a sample of the same transcripts coded by the Principal Investigator. Once an 80% agreement rate in coding had been reached, the codebook was finalized, and the Principal Investigator coded the remaining transcripts.

3. Phase I Results

Findings from the documents were recorded into an excel spreadsheet which included the a-priori constructs, key word themes and phrases directly from the documents themselves (Appendix 8). A summary of the some of the high-level findings from the documents providing specific examples for the a-priori constructs are below. Some of the a-priori constructs are referenced in more than one heading, for the summary if they overlap, they were combined into one description. The findings were then aligned with the research questions and are listed Table 2 which crosswalks the a-priori constructs with the major themes and aligned references.

a) Defining/Describing integrated care – Integrated care is a holistic approach to care that seeks to combined both the medical/physical and the behavioral health of the patient to be addressed in a comprehensive visit; one example referenced in the documents:

> *Integrated Care means treating behavioral health and physical health together using collaborative documentation that includes a multidisciplinary team.*
> *(Real World Application Presentation, 2018)*

b) Characteristics of integrated care- In describing some of the important characteristics of integrated care the documents reference teamwork with comprehensive care with the patient at the center. Some examples from the documents:

> *Characteristics of integrated care include a teamwork focus with comprehensive care as the goal. (Poster Presentation, 2013)*
>
> *An integrated practice should be patient centered (Real World Application Presentation, 2018).*

c) Culture Change for integrated care- Culture change must take place within the practice as well as individuals because it is a type of transformational change. The culture of a traditional fee for service type practice will not fit in an integrated practice. This is identified as key construct and some descriptions are provided by the documents:

> *Integrated care is a new approach to patient care where the collaboration must be improved between behavioral health and primary care providers.*
> *(Funding proposal, 2010)*

> *The integrated care team must establish necessary changes that need to take place so that barriers to communication are diminished or eliminated. Integrated care requires a shift from the traditional mental health service delivery thinking; it will be an all-inclusive; physical and behavioral health addressed in one visit. (Poster Presentation, 2013)*
>
> *The integrated practice culture must establish and embrace a shared space and open sharing of information. (Real World Application presentation, 2018)*

One of the biggest culture shifts is the providers must understand and help patients understand that interruptible appointments may occur. (Poster presentation, 2013)

d) Current State of integrated care- In describing the current state of integrated care at this practice the documents reference core principles that the practice follows as a guide as well as the program design plan of the integrated practice:

Some of the core principles of integrating behavioral health into primary care is that medical needs are still primary. Emotional and behavioral problems affect physical health. Integrated care should improve access to patient care through collaborative efforts between providers and patients. (Real World Application presentation, 2018)

When designing a program for integrated care you must assess the readiness for integration including resources, capabilities and determination. (Funding Proposal, 2010)

e) Strengths: Communication/collaboration for integrated care: A strength for this practice as recognized in the documents is the importance of communication and collaboration both internal and external, formal and informal. This construct is referenced in a variety of ways in the documents and recognized under strengths and facilitators and includes both internal and external communications.

Internal communication:

Integrated care requires focused improvement of workflow and provider communication including care consultation for complicated or high-risk patients (severe mental illness for example). (Poster Presentation, 2013)

The integrated practice needs to inform patients of the importance of collaborative documentation to integrate physical and mental health care as this facilitates communication with the patient as part of the team. (Poster presentation, 2013)

External communication:

Integrated care requires increased efforts for contact with those organizations external to the UPMC system for coordinated care for specialty care referrals, other healthcare systems working with UPMC and private and public insurers/payors. (Real World Applications presentation, 2018)

f) Strengths: Adapting/ Addressing Issues- This construct was referenced in the documents as important to identifying gaps and addressing those issues through adaptation at various levels:

Integrated care must address the practice modifications that need to take place including workforce and staffing changes. Efforts should be made to foster communication within multiple team meetings and should include both formal and informal communication. (Real World Applications presentation, 2018)

The practice members must identify gaps and assess if they can be addressed; such as opioid epidemic, social needs and fragmentation of care. (Funding proposal, 2010)

g) Gaps: Funding/Reimbursement- Funding and reimbursement was identified in the documents as an important construct to integrated care and reflected here:

Integrated care faces reimbursement challenges that are current and ongoing; including non-billable time such as case management and discussions with third party payors which can be long and arduous. (Real World Applications presentation, 2018)

Grant proposals can be time-consuming to write but currently are a needed source of funding for integrated care. (Poster presentation, 2013)

h) Gaps: Workforce-The documents referenced workforce issues related to capabilities of the current practice which included those areas that may be identified as a gap in this integrated practice:

For full integrated care the practice should be able to include more specialties for children/families, group therapy and those with severe and persistent mental illness Include more specialties children/families. (Real Word Application presentation, 2018)

i) Actual Experience: Vision of Integrated Care- The vision of integrated care includes providing holistic healthcare:

Improving both the physical and behavioral health or patients by providing on site behavioral health support in a setting where trust in the physician and professional staff has already been established. (Funding Proposal, 2013)

j) Barriers: Expectations of Providers/Patients- This construct references the presumed or realized expectations of providers and patients and is also recognized under the description of integrated care, characteristics of integrated care and culture shift:

> *Integrated care means being able to co-manage patients versus complete hand over to mental health care, having a shared responsibility and recognizing that it is a new approach to patient care (interruptions are normal). (Real World Applications, 2018)*

k) Barriers: Identification of challenges- A barrier to integrate care as referenced in the documents is identifying challenges which may change and may need to be addressed immediately or sometime in the future. It falls under a barrier as it is a continual process; this construct was also recognized and similar in description to the identification of gaps construct and the example below provides insight:

> *An integrated practice must assess the challenges that may create barriers and should be an ongoing continual work in progress; for example, behavioral health staffing. (Poster Presentation, 2013)*

l) Facilitators: Funding Streams- Also referenced under the reimbursement/funding construct, funding streams are a key construct to integrated care, finding innovative ways for funding may foster long term sustainability. This integrated practice uses the residency program, a philanthropic arm of St. Margaret's Hospital that provides financial help and supplies, grant funding as funding streams. Additionally, the documents reference new codes anticipated from CMS allowing the integrated practice to bill for behavioral health services.

> *Our integrated practice uses several funding streams to help keep the integrated program running, the residency program through UPMC Medical School provides subsidies, The St. Margaret's fund which is a philanthropic fund that provides financial resources as well as supplies, and grant funding. (Real World Applications presentation, 2018)*

m) Key Learnings: Time Consuming Change and Adaptations/flexibility- Some key learnings captured from the documents are that change is time consuming especially when the practice is

attempting to address the issues as they evolve. And that individuals within the practice including leadership and the greater organization needs to be flexible.

> *Culture change is difficult and takes time, champions are needed at all levels and must be motivating and encouraging. Integrated care takes flexibility and teamwork from providers and patients and needs to be considered a work in progress.(Real World Applications presentation, 2018)*

n) Future Progress: Reimbursement/Funding- Referenced earlier under other headings, reimbursement and funding is a key construct for the present and the future. Financial sustainability is necessary for the future of integrated care. While CMS codes may be available the insurers/payers themselves must have them in their system. Other long-term solutions are needed to continue to meet the needs of the community.

> *Integrated care practices must have the ability to bill for social service help/case management time because there is a lot of time spent on helping the patients with their social issues; this is part of holistic care. (Real World Applications presentation, 2018)*

o) Future Progress: Sustainability-An important construct in integrated care practice is one of sustainability. As a non-traditional approach to care, the traditional resources are not one that can necessarily be relied upon for the future. The practice must assess and plan for the future and how the integrated care could be sustainable:

> *Look to expand the practice into areas of need that are not being addressed such as the need for addiction services and those with dual diagnosis treatment. Continue to seek out upstream interventions and how the practice may be able to adapt to address. (Real World Applications presentation, 2018)*
>
> *The reimbursement system should be updated to allow for all services including case management and for helping with social services. (Poster Presentation, 2013)*

Table IV. Phase 1 Content Analysis Themes: Documents

Phase 1: Content Analysis A-Priori Constructs	**Brief Description of Emerged Themes**	**Aligned References**
Integrated Care (Define, Describe, Characteristics) ***(Q1 What are the stakeholder perceptions of the key characteristics of the current state of integration at UPMC/St Margaret's Family Health Clinics?)*** ***(Q1a.How is integration at UPMC perceived and defined by UPMC staff?)***		
Definitions of integrated care Characteristics of integrated care	<u>Integrated Care means:</u> Treating behavioral health and physical health together Collaborative documentation Multidisciplinary Team (including the patient) <u>Characteristics of integrated care:</u> Teamwork Ability to diagnose and treat or refer for severe cases Comprehensive Care Patient Centered	Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018); The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); PHQ-2 Screening Tool
Culture Change	New approach to patient care Improve collaboration between BH and PC providers. Establish changes necessary to break down barriers to communication Sharing of information increases (transparency) Shared Space Interruptible appointments/Warm Hand Off	Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Current State of Integrated Care	<u>Core Principles of integrated care:</u> Medical is primary Emotional and behavioral problems affect physical health Improve access to patient care	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Integrating

	Collaborative efforts and regular communication between providers/patients <u>Program Design –</u> Readiness for integration (resources, capabilities, determination) Identify populations at risk, asses the chronic and acute conditions. Determine patient care-appointments, scheduling, roles, providers, protocol	Behavioral Health into Primary Care: Real World Applications Presentation (2018) Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018); The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010);
Strengths ***(Q1b What are the strengths and gaps with the current level of integration?)***		
Communication/Collaboration	Focused improvement of workflow and provider communication Care consultation for complicated and high-risk patients	Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Adapting/Addressing Issues	Practice Modifications Workforce change, staffing changes Foster communication-multiple team meetings, identify team members Formal and informal communication is necessary	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Gaps ***(Q1b What are the strengths and gaps with the current level of integration?)***		
Identify Gaps	Fragmentation of care Opioid epidemic-substance use treatment is needed	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers –

	Social Needs: employment, housing, insurance, transportation	Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Funding/Reimbursement	Reimbursement challenges current and ongoing Non-reimbursed time (case management) Grant proposals/time consuming-no guarantee-time limit Third party payer negotiations can be long and arduous	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Workforce	Include more specialties children/families Need to address the sickest patients-severe and persistent mental illness Group Therapy	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010)
Actual Integration Experience ***Q2. How does the original vision of integration compare with the actual integration at UPMC?)***		
Vision of Integrated Care Vision v Reality	<u>Vision:</u> Practice goals and objectives stated to achieve better access to care Provide quality medical care for patients and families Train compassionate highly skilled providers Address a wide range of issues Quality and convenience of care <u>Reality of integrating care-</u>	Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)

	Some issues arise only after the integration implementation Not everyone on the same page always-conflicts still happen between providers Resources do not always align with need	
Barriers ***(Q3. What are the perceived barriers and facilitators of the UPMC integrated care journey?)***		
Expectations of Providers/Patients	Co-manage patients versus complete hand over to mental health care Shared responsibility New approach to patient care (interruptions/transparency)	Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Identification of Challenges	Challenges that create barriers to care Integrated behavioral health staffing Continual work in progress	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010)
Facilitators ***(Q3. What are the perceived barriers and facilitators of the UPMC integrated care journey?)***		
Communication	Collaborative work together Engage patients Engagement of the entire team including patients Notes, emails and team meetings to communicate and discuss issues	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral

		Health into Primary Care: Real World Applications Presentation (2018)
Funding Streams	Residency Program St. Margaret's Fund Grants Reimbursement from payers- new codes coming(?)	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Key Learnings ***(Q4. What is the process of documenting lessons learned?)***		
Time Consuming Change Adaptations/Flexibility	Culture change is difficult and takes time Staffing can be unpredictable Flexibility and Teamwork should be encouraged Champions needed at all levels- must be motivating, encouraging and will to support the integrated team Buy-in from staff, providers and patients Work in progress	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Future Progress ***(Q5. What are the stakeholder's perceptions for what actions need to be taken to move to a deeper level of integration?)***		

Reimbursement/Funding	CMS codes recognized by private insurers Ability to bill for social service help/case management time Plausible and long-term funding sources	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Sustainability	Expanding the practice – need for addiction services and dual diagnosis treatment Reimbursement system should be updated to allow billing for ALL services Funding for case management/social services help Support from internal (UPMC) and external stakeholders (insurers, healthcare system) Upstream interventions	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Communication and collaboration external	Contact, communication and collaboration for patients outside of the UPMC system. For coordinated care for the specialty care referrals. Other healthcare systems working with UPMC Private and public insurers/payors.	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)

4. Phase II Results

Findings for this study are organized by five main research questions and respective sub-questions. The focus group and key informant interviews were used to gain a deeper understanding of participant perceptions of integrated behavioral health into primary care operates at UPMC-St. Margaret's, specifically the facilitators and barriers to implementing care and exploration of the factors that impact integrating care. While the focus group and the key informant interviews were originally to be separated as discussed in Chapter 3, these two pieces were merged.

Table 5 displays key themes from the content analysis aligned with findings from the focus group and interview data. An in-depth description and discussion (categorized by research question) of the findings follows below.

Table V. Phase I Content Analysis Themes Cross-walked with Phase II Primary Qualitative Data Results

Content Analysis Themes	**Phase II: Revised Themes from Data Analysis from In-depth primary qualitative data**
Integrated Care-(Defined, Described , Characteristics) ***(Q1 What are the stakeholder perceptions of the key characteristics of the current state of integration at UPMC/St Margaret's Family Health Clinics?)*** ***(Q1a.How is integration at UPMC perceived and defined by UPMC staff?)***	
Definitions of integrated care Characteristics of integrated care Culture Change Current State of Integrated Care	<u>Integrated care includes a culture change (or shift) where the patient is the focus</u> • Change in culture-team focused, "interruptability" for appointments • Patient focused, patient engagement as part of the team (warm hand off) <u>Implementation of integrated care is an ongoing process; it is not linear</u> • Adaptability of evolving change

	• Recognize there are many moving parts to integrated practice • Continual monitoring of practice and community to make changes based on need <u>Integrated care is all inclusive</u> • Holistic Care • Co-located
Strengths and Gaps (Q1b What are the strengths and gaps with the current level of integration?)	
<u>Strengths</u> Communication/Collaboration Adapting/Addressing Issues	<u>Collaboration and communication enable comprehensive care</u> • Open and ongoing, both formal and informal communication • Warm hand off • Consultations/e-consult • Acta as a bridge and provide linkages (externally) to those services and needs for the patients in their care <u>Continuing to address situations to the integrated practice-</u> • Changing landscape- opioid crisis- recently expanded practice to include MAT (medically assisted treatment) for substance use disorder. • Team meetings to discuss and adjust approaches to patient care
<u>Gaps</u> Identify Gaps Funding/Reimbursement Workforce	<u>There is not a standard or simple way to measure our success or track outcomes</u> • Not a good system to measure success, notes are not real time; can create duplication of efforts • Not an effective way to track aggregate patient data; attempts to create their own system becomes cumbersome • Social determinants of health should be included but no real way to include this <u>Social Services like housing, transportation and employment are not addressed</u>

	• Social services and social determinants of health. How can we help any behavioral or medical need when patients are struggling to find housing, food and transportation? Cannot bill for this time. <u>Not equipped to address other types of therapy (long term, group, family, children)</u> • Practice is not designed to treat for long term therapy, children, or groups (multiple visits in a week, month etc.) it is still primarily a family practice. <u>Not equipped to address severe and persistent mental illness (SPMI) such as schizophrenia or bipolar</u> • Not equipped to treat Severe mental illness beyond for the long term, refer out to cmhc or inpatient <u>There are other potential gaps that create challenges for the integrated care practice</u> • Integrated care doesn't include other areas of health: dentistry, minor surgery, nutrition. • Different priorities of UPMC larger health system and integrated care practice
Actual Integration Experience ***(Q2. How does the original vision of integration compare with the actual integration at UPMC?)***	
Vision of Integrated Care Vision v Reality	<u>The larger vision of integrated care is not always realized in actual practice</u> • Vision and reality don't always align, goals are not clear • Reality is not all elements can come together as envisioned <u>The goals of integrated care should be clear</u> • Clear understanding of the demographics • Convenience to access is helped by proximity-patients more likely to show up <u>Implementation strategies and tactics should align and be achievable</u>

	• Community awareness and understanding of integrated care practice • Continued growth of the practice and patient population
Barriers and Facilitators ***(Q3. What are the perceived barriers and facilitators of the UPMC integrated care journey?)***	
<u>Barriers</u> Expectations of Providers/Patients Identification of Challenges	<u>Historically healthcare is siloed and separate</u> • Shift in thinking and care from separated care- change from traditional roles: "Psych goes one way and medicine another way" • Being different/unique creates a challenge for certain accrediting bodies that don't fully usually integrate i.e. pharmacy <u>Reimbursement for integration is generally not supported externally</u> • CMS codes don't automatically translate • Billing for multiple visits in one day are not reimbursed – usually the BH part- de-values BH • No clear or concise way to bill for certain services; confusion for patients and providers <u>Funding for integrated care can be difficult</u> • Grant applications take time, even with a dedicated position to this task it is overwhelming- not reliable • Philanthropy helps but also unrealistic for long term
<u>Facilitators</u> Communication Funding Streams	<u>The UPMC residency program supports integrated practice</u> • Learners looking to learn and expand their experience • Provides subsidy for funding • Family medicine, pharmacy and psychiatry all benefit from the residency program and get trained on basics of behavioral health care <u>Champion(s) are paramount to the success of integrated care</u>

	• Paramount to success. • Champions to educate and help others integrate • Motivates and encourages the team is also a leader and influencer, humble. • Believes in the program <u>Team Meetings are the cornerstone of communication and collaboration for integrated success</u> • Formal and informal meetings to discuss strategy and tactics to integration. • Discuss needs/changes/what's working and what is not • Several types of meetings<u>:</u> • Integrated Team Meetings: Specific to the BH integrated team -discuss the specifics of the integrated practice • Huddle Team: Provides a quick overview of the day, agenda for patients coming in…not necessarily behavioral health focused. Allows for discussion of those patients that may need extra attention • MDT meetings: we have a variety of disciplines that all come together to meet regularly and discuss patient issues with the patient and inform about the patient.
Key Learnings ***(Q4. What is the process of documenting lessons learned?)***	
Time Consuming Change Adaptations/Flexibility	<u>Team meetings are the cornerstone to capturing lessons learned</u> • Team meetings are where the formalized capture of lessons takes place; formal agenda, minutes and follow up • Several items captured: culture shift, team work and compromise, and residency program,

	Adjustments and adaptations of the practice, approach, perceptions and attitudes are ongoing • Turnover initially • Important to show value/worth of integration • Adapting systems and attitudes
Future Progress ***(Q5. What are the stakeholder's perceptions for what actions need to be taken to move to a deeper level of integration?)***	
Reimbursement/Funding Sustainability Communication and collaboration external	The future of this integrated care practice must address sustainability for the long term • Foster current funding streams and plan for the future of addressing unmet needs • Reimbursement/Payor changes to address the different structure • Integrated care is the future of healthcare Continued knowledge building: Funding streams, training, treatments that are evidence based • Training for new staff and tenured staff integrated care • Remaining current on evidence-based care

Research Question 1: **What are the stakeholder perceptions of the key characteristics of the current state of integration at University of Pittsburgh Medical Center/St. Margret's Family Health Clinics (UPMC)?**

Participants shared their perceptions of the current state of integrated care at UPMC/St. Margaret's Family health Clinics. They provided descriptions based on their own experiences with integrated care. The major themes that emerged from the from the participants are culture change and ongoing implementation.

The culture change includes not only practice shift but an individual approach as well where the patient (not the provider) is the focus of the treatment and driver of care. The shift must include a strong commitment by all involved within the practice. Further, helping the patient understand the shift by encouraging engagement during the appointments is important.

Further, participants described the implementation of integrated care is ongoing; it is not a linear process but more of an iterative process with continual adaptability; assessing reassessing and changing as needs change.

Integrated care includes a culture change (or shift) for providers and patients, where the patient is the focus

Participants' backgrounds include experience in traditional primary care practices which provided an understanding of working in a non-integrated practice. The participants described how the culture in integrated care is different from the "traditional care" commenting that in traditional care the physician/clinician is the driver of the treatment plan. For example, the patient arrives at the appointment with a problem and the physician will decide on the best treatment plan and tell the patient what needs to be done.

Participants commented that in an integrated model, the patient is a member of the treatment team actively collaborating regarding their own care. For example, the patient arrives at the appointment and after describing and reviewing the issue with the case manager they will arrive at treatment plan together which will likely include additional follow up steps and possibly additional team members.

One participant commented on the shift in thinking for the whole clinic; patients and providers alike:

"Initially culture shifts for a doctor's office was also a challenge. Having people understand that the family doctor's office is an appropriate site to also address mental health issues was a challenge. A shift in thinking…"

Further, participants mentioned this shift in care is an entire practice culture change and as with any major change it requires a strong commitment by all involved. As described by the participants, the shift in care cannot occur with only a few clinicians or members, it requires an understanding that the everyone involved in the practice must be committed to the change. This culture change begins with the clinicians but as described by the participants must include a commitment to change by the patients as well. The approach to care is inclusive one that must permit a change in thinking from the traditional approach to care as described earlier. In the integrated model the commitment is to collaborative care and that drives the decision for patients' healthcare as a team. Including the patient as a key stakeholder in the treatment team one participant reflected:

"Well we have a team approach…. and part of the team is obviously the patient. And you know, trying to focus more and more on the patient as the driver of the care."

Participants also shared that helping the patient engage in a discussion is an important factor of including the patient as part of the team. Participants reflected that appointments must focus on helping the patient actively engage as this may not come naturally as part of previous practice appointments. And in the current state of integration, one participant recognized that continued patient engagement is an important detail:

"Engagement is probably the most important characteristic… what we're really seeing is patients becoming more engaged in their own care"

"We really understand that to bring the patient along with us on their journey towards health is that we need to address first is what they feel is their priority"

"If you don't address what the patient's priorities right out of the gate, then they'll feel like you're not listening and immediately they recognize you're not addressing their needs and there's a lack of trust."

Participants mentioned the change in culture requires a new focus on all aspects of the patients' care including the ability of both the provider and the patient to understand the shift and be open to "interruptiblity" for a "warm hand-off" or for a consultation between the different team members; such as between the behavioral health and primary care providers. The "warm hand off" was described by the participants as the interaction between the case manager, the patient, the behavioral health specialist and the primary care physician. The "warm hand off" occurs when it has been determined that there is a behavioral health need and a consultation occurs to assist in determining the next steps for the behavioral health care. Further, participants referenced the "interruptibility" as a core concept of the "warm hand off" and a key aspect of the current state of integrated care at this practice. Interruptions are not generally practiced or permitted in traditional behavioral health care as a strict understanding of a "do not interrupt" policy during a behavioral health session. The ability to literally interrupt a clinician already engaged in another appointment for the opportunity to at the least introduce the patient to the clinician in need is a core concept of the current state of this practice's integrated care. The warm hand off was referenced by several of the study participants and one provided a specific example:

"The warm handoff … we physically get one of our behavioral health counselors and bring them to the patient's room."

The warm handoff is one considered to be one of the strengths and main culture of the current state of UMPC/St. Margaret's practice:

"What's working well is being able to do that warm handoff …it's a big part of our success."

Implementation of integrated care is an ongoing process; it is not linear

Another key characteristic as described by the participants is the ability to adapt to ever evolving situations. As previously mentioned, integrated care incorporates an initial change in the approach to care; participants elaborated by describing the ongoing ability to change and that the path to implementation is not linear. Participants further discussed the importance of recognizing that there are many moving parts to an integrated practice, including the main focal point of patient care. The willingness to actually change the approach to the individual patients' care when the situation arises is paramount to integrated care as described by the participants.

While the practice in this study has been integrating care for over decade, participants described examples of evolving adaptations within the practice. The descriptions included multiple areas such as changing payment models, addressing external healthcare changes and how the practice must continually be aware and ready to adapt. Many of the specific descriptions appear later in the study in greater detail, however the team approach to the iterative process is described as a key characteristic in the following example.

One participant mentioned an example of how continual monitoring of the practice along with the ability to change is a key feature of implementation. The front desk noticed the patient waiting times for the patient to be "brought back" to the treatment room seemed to be increasing. It was determined that this may be simply because of the practice protocol (nurse brings back the

patient). During the next team meeting, it was decided that the protocol should evolve along with the practice and so that any clinical team member can bring the patients back to the treatment room, not just the nurse. The result was that waiting times began to decrease because residents, social workers and physicians who were available could bring the patient back and get the appointment started.

> *"I would say we would address things that come up during the monthly meeting. There's a whole list of things we go over. But if it was something more urgent, I would guess because they meet weekly if anything wasn't working…we would discuss it then."*

Research Question 1A: **How is integration at UPMC perceived and defined by UPMC staff?**

Definition:

Participants shared their perceptions of how they describe and define integration at UPMC-St. Margaret's Family health Clinics. They provided insights into characteristics of integrated care, strengths and gaps, their perceptions on what's working and what is not. According to participants, the current description of integrated care includes a holistic patient focus on care to where the practice strengths are built on communication and collaboration.

Integrated care is all-inclusive care (holistic, co-located)

Participants emphasized the concept of all-inclusive care. Everyone in the practice needs to understand integrated care and recognize that each and every person's role within the practice is an integral part of the patient's care. Participants further described all-inclusive care as the recognizing treatment team may include non-traditional roles but is an important description of defining integrated care in this practice. One participant reflected that each person in the practice that "touches" the patient is part of the integrated care:

"….everybody from the front desk to the doctors to the security guards and beyond need to be into it and invested in it because that front desk person is the first person they see and the first person they deal with. If the front desk isn't treating the patients as they should be treated, then you've started off on the wrong foot right there. I think everybody has to be invested in it. Everyone in the office."

Another characteristic as described by the participants that makes integrated health care unique is the sharing of information among the team members related to patient care and establishing a comprehensive treatment plan to address the whole patient. This "holistic" approach to care is described by the participants as treating all issues related to patient care and keeps the patient at the center of the care. In traditional care, participants describe the fragmented care that, as previously mentioned, is driven by the physician and will involve a referral if there are any issues outside of the main reason for the scheduled appointment. The participants at UPMC/St. Margaret's reflect that integrating care means treating the entire person whatever that may entail during the encounter:

"It means addressing a patient's, physical health as well as behavioral health. In a collaborative and simultaneous way, with multi- disciplinary team members, who can all contribute to kind of the best care plan in order to address the patient's psychosocial as well as physical health needs."

Participants discussed the convenience of having behavioral health and physical health at the same location. But also considered the co-located integrated practice as a way to deter stigma because as patients are in the waiting room; no one knows why the patient is there. Having the behavioral health needs addressed in the same co-located practice assists in keeping the patient the center of care including the patients' comfort in seeking care and/or treatment. Unlike going to a specialty mental health clinic, in the integrated practice, the patient could be there for a physical health issue or behavioral health or both:

"Sometimes the patients just didn't want to go through the "hoops" of trying to make an appointment with a mental health clinic and then have the stigma of going to a community mental health center or a standalone psychiatric center"

Research Question 1B: **What are the strengths and gaps with the current level of integration?**

Strengths

The participants provided their perceptions on the strengths of the integrated practice at UPMC-St. Margaret's Family Health Clinics. They described key themes that were highlighted in the literature; focusing on collaboration, communication and teamwork. The functions of their multidisciplinary teams and how they interact with the common goal of holistic patient care. Integrated care at UPMC/St. Margaret's works because of the collaboration and communication within the team meetings (huddle team, integrated team and multidisciplinary team meetings).

Collaboration and communication enable comprehensive care

The majority of the participants stressed the importance of collaboration and communication in the form of meetings both formal and informal as well as consultations with specialists whether that means psychiatry, social work or pharmacy. Comprehensive care includes the all-inclusive approach as described and discussed earlier. Treating the entire person, involving all team members and all available resources is most effective when communication and active collaboration is open and ongoing, participants mentioned.

"{Our collaboration is strong} because we are actually talking to one another I think and having these types of ongoing meetings is what differentiates us from other practices. Our integrated care is more than just co-located, we are doing mental health in your doctor's office.".

When a patient either presents with or it is uncovered in the appointment that there is a behavioral health need, the integrated practice can address that need immediately. As previously discussed, the "warm hand-off" is a way of linking the patient to the behavioral health provider. However, sometimes the face-to-face "warm hand-off" is either unnecessary or uncommonly the provider is unavailable. Participants described that there are several cases where a simple prescription change or other uncomplicated behavioral health occurrences may not need immediate psychiatric intervention. Further, participants mentioned that although not usual, there are times that the behavioral health provider is physically unavailable to meet face to face for a "warm hand-off". In these situations, participants mentioned that a psychiatric consultation is available to the primary care provider. Study participants emphasized that the ability to have a consultation is a key component at the UPMC/St. Margaret's practice. Consultations often utilize technology in the form of an "e-consultation" with the Psychiatrist to assist the primary care provider in a timely fashion for a behavioral health situation. As described by the participants, the "e-consultation" allows the primary care provider to consult over the internal memo system in real time, with the usual response time taking place under twenty-four hours and often uncomplicated issues are resolved before the patient leaves the clinic. This approach while gaining more visibility is still fairly unique to this practice according to a study participant:

> *"The e-consult is actually a unique strength. I've presented at several conferences and it doesn't seem like there are many people using that particular model. The PCPs really love it because sometimes if the patient's not ready to do a full behavioral health assessment or maybe they don't even need a face to face psychiatric meeting. The patient may feel that he might want to take a few extra steps and the PCP feels they have some support via consultation"*

In describing the e-consultation as part of the treatment plan one participant mentioned the following:

"The e-consultation might take a little longer, but we try to get back within 12 to 24 hours. Because we do go through the chart. the patients and the PCPs also can, if they really need to, they can text me or, you know, call me if it, you know, if there seems to be some urgency. But often times it's you know, it's, it's fairly quick. I think that we, we try to get back with them."

Participants mentioned that when the situation arises, and UPMC/St. Margaret's cannot provide the services at their facility collaboration and communication is equally important externally as it is internally. Situations that may need external referral include those individuals with severe and persistent mental illness (for example, schizophrenia or bipolar), those needing long term therapy, and children and adolescent patients were the most mentioned cases. These areas are described in greater detail in the study as identified gaps. Study participants stressed that making sure the connection or bridge between UPMC and the external facility is very important to comprehensive continuity of care and providing a link for the patients' care. The practice providers and case managers discussed the details and follow up that they provide in making the external link. Participants said that the communication that this practice provides includes touch points with the external facilities and follow up, instead of simply providing a name and number on a piece of paper and sending the patient on their way.

"Everybody should be assessed, evaluated and then get a recommendation. If it is determined that a referral is needed, we'll usually encourage an appointment where we would d be included in brief calls with people to agencies…"

Several participants noted that simply being a bridge to care can also serve the patient so that they do not feel abandoned:

"I offer it to sit with patient and make that phone call. And if they don't want to do it, at that point I provide them with all the contact information. We will follow up with a phone call to make sure that they got in. We have them sign releases of information so that we can try to coordinate care."

"I find that we act like a bridge a lot until we can get people into more comprehensive services."

Continuing to address situations within the integrated practice

Study participants discussed the ever-evolving healthcare landscape as well as situations that arise. Participants commented on changing patient populations, community changes such as a closing of a psychiatric clinic, economic changes as some of the situations that occur in the area their clinic serves. The continual monitoring of internal and external changes allows the practice to evaluate the what's happening and address the situation through practice change.

"Recently, we're doing more drug and alcohol care with counselors and that's new for us. Prior to that, this was a situation that we realized many of our patients have dual diagnosis and so they have a mental health disorder, but they also have an addiction. So that was definitely something we recognized as a gap that we were able to address."

The participants discussed one recent example of addressing the changing landscape as it pertains to the opioid crisis. The UPMC integrated practice expanded to include Medically Assisted Treatment (MAT) for those individuals needing substance use care as part of their individualized integrated care. Participants were particularly proud of this recent change stressing the practice's ability to identify the issue and address it through providing specific services. Medically Assisted Treatment serve those who have substance use issues that occur as part of the behavioral health issue as well as the physical health situation. The practice applied for and received funding for serving this population by way of hiring specific social workers trained in substance use disorder and using MAT as the tool. The practice is now able to treat these individuals as part of the integrated primary care practice rather than refer them out. One participant commented on why this occurred:

"We recognized this {substance use disorder} as an area that may be a gap in care….our RFP was accepted for funding and we now have MAT as part of our practice."

wrote another grant to get seed money to hire Drug and Alcohol counselors. Then we just followed them, and they became very self-sustainable as we predicted because there's so much need. Then once we got them up and running and they built a service, they're paying their own way. They didn't have to be grant supported anymore

Another participant also discussed the framework on how the integrated team worked together to address this gap:

"During a team meeting our ideas and solutions can be addressed in a non-judgmental manner, like creative problem solving and thinking outside the box…Speaking from an MAT perspective, there's a space for us to talk about it in that meeting…address it as part of the program."

Additionally, most study participants emphasized their team meetings as an important strength to integrated care. They stressed that the formal and informal ability to collaborate and communicate during the multiple types of team meetings is an important construct to their integrated care practice.

"We are a team, we work as a team and if one part isn't working, we all can come together and help to work and get back on track."

The different types of team meetings and how the participants feel they are key components of facilitating integrated care are discussed in greater detail under Research Question 3.

Gaps

The participants described some identified gaps in the integrated practice such as measuring and tracking outcomes, lack of resources to address certain important areas such as social situations, long term therapy needs, and treatment for the severe and persistent mentally ill. Several other areas of identified potential gaps are recognizing that certain needs are still not integrated (dentistry, nutrition, minor surgery) and priority differences between the larger UPMC organization and the integrated practice sites.

<u>There is not a standard or simple way to measure success or track outcomes</u>

Participants noted that while communication is a key concept of integrated care, the electronic health record (EHR) system lacks an effective way to include "notes" to communicate effectively with the other team members. The providers use the notes to track an individual patient, including shared details around a particular treatment or intervention. While the notes are visible to the team members, the system does not always provide the notes in real time.

> *"I wish our electronic health record was a little more useful, I wish there was a tab within the system that I could hit for high priority patients, you know, and all providers could add to it. Right now, it's a little bit cumbersome.*

Sometimes this results in duplicative efforts that could have been avoided. They stressed that they don't have an efficient way to track the aggregate patient data to understand the effect of integrated care and essentially show the value of their practice. Further participants mentioned the difficulty in finding a standardized way to measure how integrated care is impacting patient care, economically and otherwise.

> *"We don't really have a standard way to measure our {behavioral health/integrated care} outcomes. I think the only way for us to measure outcomes is to look at all of our population as a whole. Just as a primary care physician should look at mortality as a measure. But we are still behind the curve on that."*

Also, while UPMC/St. Margaret's participants discussed ways to possibly create their own tracking using an excel spreadsheet, not all team members found value in this system and in fact found it cumbersome to put information into a spreadsheet that there was no clear reason for doing it.

> *"We tried creating our own spreadsheets to try and track patient data, but not everyone regularly contributed. As this was discussed in our team meetings, people don't see the value. They feel it's just more work, like why are we doing this?"*

Several participants mentioned the social determinants of health as a way to look at patient health and find solutions from an integrated practice perspective. One study participant noted that social determinants of health are such a key part to population health and the individual's health but that there is not a good way to track and/or capture these important elements.

> *"Primary care offices should be keeping track of social determinants of health. So how many of our kids are graduating high school? How many people have stable housing? I think those are larger measures we need to address."*

Social Services like housing, transportation and employment are not addressed

Participants commented that one of the most common needs in a busy practice is to address the social issues that often contribute to suffering and make it difficult for patients to care for themselves. As the participants elaborated on this subject, they mentioned that many of their patients have housing issues such as they are homeless, or they cannot afford to pay for food or rent.

> *"Only counseling services get paid for. Social issues are such an important thing…. no one's going to take their psych medicines or their blood pressure medicines if they don't have a place to live…"*

Additionally, there is a substantial number of the patients in the practice that have difficulties with transportation issues such as not being able to get to work, run important errands and get to and from appointments. They also went on to discuss the employment issues such as not being able to maintain employment. These social issues, participants commented, exacerbates the patient management as it complicates patients being able to get to the clinic, participate in treatment, and attend follow up appointments.

Further, participants commented that trying to help patients by addressing these social issues takes time away from billable work. For example, the practice needs to bill for services to reimbursement; however, even though the case manager may take substantial time to help patients get the help they need including helping to fill out paperwork, this time is not reimbursed by insurance companies. The participants went on to say that the social issues are a real part of the patients' lives making maintaining health difficult and a low priority for the patients. The practice needs to determine how to address these common concerns. However, as study participants noted that even though it is apparent these sources of vulnerability exist, having the resources to help is not always possible. There is not a good model to follow that can help in this situation, and billing for the case manager's time for addressing these issues is not possible.

Several participants elaborated on this subject:

"This is what some of the case managers were mentioning that they deal with is one of those ancillary things you can't bill for either: helping someone get to transportation or setting up an appointment or signing up for social security"

"Our counselor is doubling as our social worker. If they're not doing counseling, then they also spend an hour trying to find housing for someone or, do work on transportation or help them with a medical assistance application."

"There's no government or reimbursement-based coding for care management and transitional care management that we're trying to do. And even the codes that we can attempt to bill for the documentation requirements are so onerous that it almost negates the ability to do it".

Not equipped to address other types of therapy (long term, group, family, children)

Integrated care practices are generally a primary care facility-- one which focuses on addressing the whole patient and getting them the care they need. Participants commented that in cases where long term therapy is needed, including therapy specifically focused on families and children, this practice is not equipped to properly address these situations. They discussed that it is often that these types of patient groups need to be referred out to external facilities that specialize in the areas of need. The patients needing long term therapy may have more complex issues such as domestic abuse, marital issues, problems in school or work, or other behavioral health situations that require longer term counseling as part of the treatment plan.

UPMC/St. Margaret's practice functions primarily as a primary care facility that has integrated behavioral health focuses on the touch points that family health care normally would; such as assessing the need and treating the issue. Long term talk therapy is not included at this level of the integrated practice model because it not only lacks the internal resources to address longer term therapy but externally resources are limited as well. Participants said the practice is structured to essentially function as a catalyst to better holistic care, however, when a patient diagnosed with major depression for example, long term talk therapy is a key part of treating this issue sometimes needing multiple session visits with a counselor. This integrated practice is not equipped for these situations, and participants mentioned the external resources are not much

better, patients can wait months for appointments. A study participant elaborated on this by saying:

> *"If anyone needs more intensive therapy; that is something we usually have to refer out to an intensive outpatient program or partial hospitalization. These patients need to be referred out because we don't have that capability here; the most we can see patients with therapy is once a week."*

Not equipped to address severe and persistent mental illness (SPMI) such as schizophrenia or bipolar

Another gap participants discussed is the challenge of providing adequate medical care to individuals with serious mental illness.

> *"I think we're limited in how much we can care for people with severe persistent mental disease just because we don't have the resources to deal with that"*

Serious and persistent mental illness includes such diagnoses as schizophrenia and bipolar. While this hard to reach population could be served in a primary care practice there is specialized training and understanding that is needed and UPMC lacks the infrastructure to deliver optimal care for SMPI. As discussed earlier, this patient population requires intense therapy as part of the treatment and are likely struggling with social issues mentioned. The participants mentioned this patient segment needs a significant amount of time and attention which the providers and clinicians are simply not trained or equipped to manage. Although the psychiatrist is part of the team, SPMI requires intense long-term treatment, sometimes involving an inpatient hospital stay and then specialized outpatient care. Currently, the protocol includes notifying the Psychiatrist and scheduling an evaluation, however, this integrated practice is not equipped to treat multiple cases within this population, and they will still be referred out to a CMHC (Community Mental Health Center). The participants see this as a gap because there are enough of these patient types

that will come to their practice believing they will have their situation managed at this clinic. A participant reflected specifically on this:

> *"For some people we can't meet their needs. I mentioned early onset psychosis and the efforts for those people are much more robust. Full service, specialty mental health care that has a lot of service coordination; including going to the patient's home, and very good Psych Med management that is really on top of things. We can't quite offer that level of service."*

<u>There are other potential gaps that create challenges for the integrated care practice</u>

Participants commented that while this practice is functioning at a high level of integrated care, there are still some areas that cannot be addressed or treated such as minor surgery, nutritional care, dentistry, and physical therapy. One participant reflected by saying:

> *"But it is just that there are some things that we can do in the clinic and there are some things we cannot do in the clinic."*

These identified gaps create challenges for care for similar reasons mentioned in other areas of the study, because when a patient needs something like nutritional care for a medical issue which would then be "all inclusive" care, it is just not the level that this practice has integrated. Participants continued by discussing that these challenges may not ever be able to be addressed in this integrated care practice as it requires many more resources that they simply do not have or expect to have.

Not being able to address the gaps above may be part of a larger systems problem. Another perspective that provided insights into other potential gaps is the larger organization/institution of UPMC has different priorities which could become an unintended issue for the integrated practice because:

> *"on the one hand they don't bother the practice and they allow us to just do our work. But on the other hand, if expansion is to occur such as more sites or requests to address other needs (for workforce, funding, resources, etc.) may bring unwanted attention to the practice."*

It's a constant balance between the good work the practice is accomplishing and the varied priorities of the bigger institutional picture. Organizational goals and the goals of integrated care as well as priorities for funding do not always align, this idea is not necessarily unique to UMPC/St. Margaret's as one participant noted:

> *"I don't think it's specific to our practice…. I just think its primary care in general that's just not recognized as a priority in the system.*

The larger health system needs to address their own financial priorities focusing on those areas that can not only draw more money but also help to create a solid reputation for the institution. Participants commented that UPMC is a business that functions within the medical space, there is competition for those healthcare dollars; not only locally in Pittsburgh, but in the greater Western Pennsylvania/Eastern Ohio area. Like most area hospital systems, they have a Board of Directors that they are accountable to which includes future plans for sustainability and expansion.

Other participants elaborated further on this issue/gap noting that the priorities of the UPMC Health System appear to be fairly clear focused on the larger dollar areas of medicine and integrated care may not be one of them. As discussed, integrated care includes behavioral health care; behavioral health is not typically a positive financial draw; in fact, most hospital accounting systems show the behavioral health segment as financial loss. Further, participants mentioned that primary care is simply not a priority for UMPC in general for reasons unknown to the employees

but seemingly apparent. One participant described this perception based on the experiences that have been witnessed over the years:

> *"The UPMC health system is centered around specialty care and procedures. It's a transplant center. It's a trauma center. For example, you need a liver: this is where you like to go. But if you're depressed cause your kid died, and you have diabetes….that's not the priority. It's not the big moneymaker for this system directly."*

Study participants recognized that like anything else there are gaps that need to be addressed but ongoing discussions of the gaps is a strength in and of itself. The desire to change and adapting where needed is important.

Research Question 2: **How does the original vision of integration compare with actual integration in practice at UPMC?**

Vision v Reality

The vision of integrated care is described by participants as a systematic coordination of general and behavioral health care producing the best outcomes and the most effective approach to caring for people with multiple healthcare needs. The participants mentioned how vision and reality do not always align. Further, the goals of integrated care are not always clear and can be varied based on the perspective. Finally, the implementation process is ongoing, but strategies and tactics may not be well understood.

The larger vision of integrated care is not always realized in actual practice

While all stakeholders involved in integrated care believe they know what integration means, not all stakeholders may fully understand what the vision of this practice actually is; as one participant mentioned:

"I don't know what the vision is to be honest, but I think at least the way I've understood it is trying to keep as many services as we can in house."

Participants commented that since the vision isn't completely clear it is difficult to understand if the vision is realized in practice. The larger understanding of a general integrated care vision was described as providing all inclusive care to the community for better overall health of the individuals and the population.

The reality of integrated care is that not all elements can always come together as envisioned. However, participants feel that certain components of the vision as understood by the practice such as serving the underserved and disadvantaged, striving to put patients and community members at the center of care and looking to innovation are an active part of their actual practice. Participants commented that specifically the reality of full integrated care is not fully realized because of the assumption that integration will work simply because they want it to and desire for success is present. Participants further commented that they feel the vision is more of a guiding principle. In reality, the expectation is that even though barriers to the vision may exist, they will be able to be addressed and the patient's care will be better overall. Actual steps to the vision are not necessarily able to be addressed. One participant reflected on one core area of integrated care mentioned elsewhere in the study results is communication and collaboration. The expectation is that collaboration and open communication will happen seamlessly but that it is not always possible:

"Sometimes we run into the same barriers that traditionally exist, for example, the ability to communicate back and forth without releases and things like that. So ideally, being able to collaborate with other practices…"

Participants summarized by saying the vision of larger organization of UPMC, the vision of integrated care within UPMC and the reality of practice is not necessarily the same.

The goals of integrated care should be clear

Study participants described one goal of integration is to understand the demographics of the patients the practice intends to help and the types of clinical issues that will be presented. This requires the practice to dedicate time to monitoring their community. Participants mentioned that they are best equipped to do this because they are members of the community and involved with community member. Participants said that establishing a clear understanding of the population is one way to help clarify which behavioral health integration capacities will be most helpful. The goals that are put in place need to come from the local integrated sites and presented to the larger organization.

UPMC/St. Margaret's' three sites operate with the understanding that many patients in the geography have access to their primary care office and are more likely to show up for these appointments. The idea is to be able to screen and address the behavioral health needs that may be co-occurring in these individuals. The goal of addressing community needs including those mental health issues is at least in part helped by the integrated care. Participants commented, mental health access is limited due to limited number of practices in the area as well as long waiting periods for an appointment; the integrated practice can help ease some of this burden. One participant provided insight into the situation:

> *"What we do try to do is improve access to care. It is really difficult even in our clinics that have really large mental health agencies… we try to get the patients some help for the care they need."*

Implementation strategies and tactics should align and be achievable:

As participants discussed earlier, implementation is an ongoing process. Study participants also discussed implementation strategies and tactics as an opportunity that needs to be addressed. Participants mentioned that making sure the community knows that this practice exists so that they can seek care and utilize the services. However, they commented that helping the community know and understand what integrated care is and how it can best serve them is difficult. Things such as marketing resources are not used for integrated care but reserved for the larger organizational priorities (mentioned elsewhere in the results). Participants feel that helping the community be more aware is important because it is possible more individuals would seek care for their medical and behavioral health issues. This would assist in the community getting healthier. This particular implementation strategy of awareness does not have a solid tactic that is associated with it. Further one participant commented that an awareness campaign needs to be specific to the local population it serves and focus on points that will have the best impact:

> *"I think getting that word out is hard. I think there were also a lot of adults around here that don't get a lot of regular medical care. Pittsburgh is a very industrial history with a proud stance of not seeking help…"*

Further, participants reflect on a long-term strategy of growing and expanding services as well as continuing to serve the community also rely on the awareness and understanding of the integrated care clinics and how they can help patients. Medical practices need to have consistent growth of new patients in addition to serving existing patients for financial stability:

> *"Identifying ways to keep the integrated care going and sustained and just really getting more people to know that we exist*."

Other participants mentioned that awareness of what the integrated practice services is "getting out there"; and when they speak with patients who've come to understand this, it is rewarding:

"I think it's nice when people do make the call and say, 'I hear you have these services. Oh, this is great. I can get everything in one place, one stop shopping!'"

Also, another participant reflected that logic of integrated care of reaching patients they may not otherwise reach has fostered the ongoing care of the community and furthered implementation of integrated care:

> *"Previously the medical community struggled to get patients the mental health care that they needed but since they would at least show up for their primary care appointment; integrated care makes sense to reach those patients"*

Research Question 3: **What are the perceived barriers and facilitators of the UPMC integrated care journey?**

Barriers

Participants recognized that there continues to be barriers to integrated care such as the historical approach to care being physically separated with different operating systems including reimbursement and funding. External reimbursement systems are not set up to support integrated health care and funding sources for supplemental finances are limited.

Historically healthcare is siloed and separate

Healthcare approaches have yet to keep on pace with the implementation of integrated care. Integrated care essentially casts aside the historical approach to healthcare (refer out for psychiatric care) and brings all or most of the care guided by a team with the primary care physician as the team leader. Study participants commented that integrated care is an innovative

way to implement patient care, but it can have challenges including needing to manage more than one traditional role. As the practice grows and as new staff or residents embed within the practice one challenge is really understanding the shift in thinking. Providers in this practice are expected to cover as many health issues as possible; referrals are not the "go-to" priority but keeping the patient in-house as much as possible. This is still quite different from the mainstream idea of healthcare. One participant noted:

> *"I think it can get challenging to sort of... wear multiple hats, but I think it's just a learning curve."*

Further, participants commented on being somewhat different can create a barrier by being a situation where an accrediting body may not know what to measure or how to compare the integrated practice with non-integrated for their evaluation purposes. UPMC/St. Margaret's has a unique characteristic of including a pharmacist as part of the treatment team. Because of this unique inclusion, the accrediting organizations for pharmacists have difficulty capturing the tasks that meet the criteria for accreditation. The overall attitude regarding this situation was one of pride that UPMC is leading the charge so to speak but it does create a unique situation. One participant commented:

> *"ASHP (American Society of Health-System Pharmacists) comes in and does their accreditation, they have commented that this is the most integrated program that they've ever seen. And they really aren't sure quite what to, or how to evaluate in some situations because we're not under the department of Pharmacy."*

Reimbursement for integration is generally not supported externally

Participants stated that while codes exist from CMS to support integrated care, actual payment structure from the payors is not necessarily in place. In some cases, the payors

(including Medicaid) will not reimburse for two appointments in the same day; for example, a primary care and social work visit on the same day. The site can bill for both but will only be reimbursed for the primary care visit. In an integrated practice, multiple visits on the same day are typical.

The participants that commented on this situation felt that this is essentially de-valuing the behavioral health portion of the patient's visit. Participants described the social work portion of the visit will generally include case management tasks such as, paperwork for SSI, Medicaid applications, transportation issues as well as a multitude of other factors not specifically reimbursed for the social workers time. This creates a barrier because the social worker feels a duty to help the patients even for the time they cannot bill for; yet there are so many hours in a day to see all their patients. The providers are faced with the challenge of doing paperwork on their own time or disrupting the flow of the day.

> *"This is what some of the case managers were mentioning that they deal with is some of those ancillary things you can't bill for either. Helping someone get to transportation or setting up an appointment or signing up for social security, these are what our social workers are helping with because it's good patient care, but we don't get reimbursed for it."*

Often the situation exists where it is unclear how or even if a service/treatment is covered. Participants mentioned it is not only the patients that do not understand their coverage for visits but sometimes the payors themselves are unsure of what will get paid. Meaning that when the practice calls the insurance companies to find out what will be reimbursed, the insurance companies do not have an answer. Many times, the patient is left trying to pay for the care themselves, or sometimes the practice will need to absorb the cost as there is not a clear/concise

way to be reimbursed. This theme was reinforced by one participant that works in the billing department:

> *"People come up to me all the time with billing questions and I get emails and phone calls….sometimes while the patient is at the clinic we can try to work with them and figure out some help that we can get that paid for if they can't do it themselves"*

Funding for integrated care can be difficult

Funding for integrated care must include some type of transformational approach to financing the practice. Participants provided insight to this practice by commenting that financing options in this integrated practice employs are various combinations of grant funding, Medicaid dollars, and philanthropic funding.

Even though UPMC/St. Margaret's has within its practice a position solely focused on grant applications and funding streams, grant applications can be a time-consuming process. Participants commented that relying on grant funding is not always feasible because of the grant application process as well as waiting to hear if the funding has come through. It is a source of funding that cannot be counted on participants said.

The integrated practice has a philanthropic arm as one funding stream. The St. Margaret's Foundation assists the practice by providing a free prescription drug program, a type of food pantry (nutritional drinks and other non-perishable items)for those in need, as well as financial funding to keep the clinics financial stable. In describing the philanthropic approach using one participant discussed the use of The St. Margaret's Foundation as a source that is helping to address the barrier of funding, however, they were quick to include that at any given time it is unknown when the money will run out.

"We have a program through The Saint Margaret's Foundation that if someone has no insurance or their insurance won't cover it, The Foundation will pay for certain immunizations and medicines."

Without this philanthropic funding, the barrier to care for the under insured or uninsured would remain.

Facilitators

Facilitators to care can take any number of forms including continual training and learning, and the importance of having champions to integrating care and ongoing communication. Participants commented on several areas that facilitate integrated care. The residency program rotation, the importance of having champions to continue to foster the continued progression of integration and team meetings to facilitate collaboration and communication.

The UPMC residency program supports integrated practice

Discussed earlier, a barrier to care includes funding streams. Participants discussed the unique approach that UPMC is using to not only subsidizing integrated care but as training and learning for the new family medicine physicians by including these sites as part of the residency program. The residency program subsidy helps facilitate integrated care financially as well as from a knowledge and training perspective. Participants explained, the residents will work either primarily at one site or rotating through the three sites as the primary care physician during the three-year residency. They have their own caseloads and will manage the patient's care as the "team leader" for the integrated team. One participant elaborated on the positive attitude about the residency program rotations:

"Nowadays with our residents, they are just sponges and want to learn and want to work with people"

Additionally, participants described the ongoing learning which helps facilitate the integrated care that takes place as part of the residency program:

"We do interprofessional education all day, every day, in every single thing we do. Most other programs only have integrated care as an elective for one week in their last year of training and that's a different level of learner."

"{As part of their training} the residents will know how to utilize as many resources at their disposal to help benefit their patient in a very collaborative way"

Further, the pharmacy residents and the psychiatry residents have the opportunity to learn and train in the integrated practice approach including a five-year residency program that will allow dual board eligibility. This type of program within integrated care is unique to UMPC/St. Margaret's. This supports the program today and the integrated approach for the future of these residents. Study participants commented that the hope is that today's learning, training and hand's on experience will help foster integrated care wherever the residents go in the future. One participant commented:

"We have different learners and we do have combined family med psychiatry residents who rotate with me when they're in their upper levels so that if they have a five year program, it's, they are going to be dual board eligible for family medicine and psychiatry at the end of their five year training."

Champion(s) are paramount to the success of integrated care

An integrated program requires major changes as discussed earlier in the results; and because of this, a champion for an integrated care model is paramount to its success. Participants

mentioned that the champion will make connections to the larger organization, motivate and rally the team members, be prepared to make the case for integration for prospective employees and also get the word out as to why this is working.

Participants almost unanimously commented that Dr. Han and his passion for integrating care as a solution to a community access to care is the main driver of UPMC/St. Margaret's success. One participant discussed how Dr. Han got involved in integration in the first place and how it all started.

> *"One of our physicians (Dr. Han) decided to work in collaboration with a local mental health facility and brought their counselor to our office every week. I think that is where it really started."*

Participants also discussed the importance of the characteristics of a champion including that of being a solid leader. Further, participants elaborated on specific descriptors of a champion; a person that not only believes in the idea of integrated care but the reasons for integrating (patient access and treatment) as well as forging ahead with motivation and humility, leading the team by being open to ideas and recognizing team members' talents and skills.

> *"I think that integrated care takes a leader that can kind of see their own strengths and weaknesses and have some humility about it"*

Dr. Han's comments below provide a glimpse into his leadership approach:

> *"I remember discussing with Jim and other members of the team saying 'I can't do this by myself. I don't want to, I don't want to be in an office where it's just all me and it's just, I'm making the decisions all day.'"*

The champions for integrated care are many in this practice, however, initially not all employees were prepared to integrate. This is described in greater detail in the findings of research question 4.

Team Meetings are the cornerstone of communication and collaboration for integrated success

Communication (both formal and informal) are key elements of this integrated practice because it is the cornerstone of coordinated and collaborative care. Study participants agreed that team meetings are a major part of communication, as it provides for a chance to discuss needs, changes that may need to take place, discuss what is working and what is not among the team members.

UMPC/St. Margaret's has several team meetings that have different focal points ranging from quick informal "hallway" meetings to weekly and monthly meetings more focused on the patients and the practice. Participants discussed the various forms of meetings and provided insight as to what takes place during them:

Integrated Care Team Meetings- These team meetings include all members on the integrated behavioral health team to discuss strategy and tactics to integration. It takes place monthly and this is about what is working what is not, what are issues and solutions to be addressed. They discuss what is new in the integrated care space that should be implemented in this practice and projects that are being worked on to help make the practice stronger.

Huddle Team Meetings- These team meetings provide a quick overview of the day, the agenda for the patients coming in that day and is not necessarily behavioral health focused. This meeting allows for discussion of those patients that may need extra attention or care coordination.

"We have all come together to meet regularly and discuss patient issues with the patient and inform each other about the patient's coming in"

Multidisciplinary Team Meetings-These team meetings meet once a week at each of the health centers with the understanding that anyone can bring a patient forward; usually those people that many need more care coordination. It provides an opportunity for the greater team to listen to the top issues of the patient cases to assure that the appropriate team members are part of the treatment. The team members may vary depending on the patient case, it may include the pharmacist if there is a possibility of a medication change, it may include the MAT team if it is either known or suspected that a patient case may have a substance use disorder.

Regular communication with team members as well as the larger practice helps the practice members stay engaged in the patient's care and support of the integrated care.

"If something comes up and if there needs to be a medication adjustment or if there's a primary care medical need, it's very easily communicated and acted upon… I think that's the biggest investment into the patients care that we do."

Research Question 4: **What is the process of documenting lessons learned?**

Formal team meetings are the cornerstone of capturing lessons learned

Since UPMC/St. Margaret's has been an integrated practice for over a decade, participants commented on the importance of capturing the impact and process so that the elements they are doing well can be built upon and the areas that need adjustment can also be addressed. Formal documentation takes place during the formal monthly integrated care meetings (described in detail earlier). Each meeting has an agenda with clear and specific agenda items that are in place either as a regular rotation or something that a team member would like to address. Meeting

minutes are kept for review as well as distributed via email to the team members. Perhaps the most important characteristic of the meetings is that although it is formal, the interaction is open and everyone in the room is treated with respect.

"The monthly meeting is probably the structured format that we have…{for capturing information on the practice}"

Some of the lessons learned that participants reflected came out of the meetings that were addressed:

(With regards to the culture shift) *"We have a practice that pulls behavioral health closer to family medicine; we need to establish that interruptions will be permitted, the old way of thinking is that time with your client in the behavioral health sector you never knocked on the door and you never interrupted the counselor- that must change for integrated care."*

(With regards to teamwork and compromise) *"We had to find a middle ground because as a team, you have to be accessible at all times. We had to work on what that would look like".*

(With regards to the residency program- reflecting on that not realizing the impact the resident program turnover may have*) "The lesson was how to help patients adapt as residents finish their program {every 3 years}. We needed to keep the patient involved and get their perspective early on. When the residents leave every June, we get a list of {provider} reassignments; we realized we needed to discuss this with patients and include them in the "matchmaking".*

Adjustments and adaptations of the practice, approach, perceptions and attitudes are ongoing

The participants reflected on some of the changes that have taken place over the course of the integrated practice. In the beginning, turnover of staff was a documented issue, but understanding why was key to addressing the turnover and changing the trajectory. In this case it was uncovered that it was a multitude of reasons some of which could not be addressed because it

was related to traditional practice which would inhibit integration. Participants commented that there was quite a lot of turnover in the practice in the beginning due to various reasons but most significantly not recognizing the value of integrated care. Additionally, the staff, clinicians and providers that had been part of the family practice prior to integrated care had a difficult time adapting to the new approach. The feeling was mutual in that the integrated care team recognized those who couldn't adapt to the new approach no longer fit and the staff who didn't see the vision had no desire to fit. However, it was an adjustment to uncover the reasons for the turnover, but adaptation allowed those issues to be addressed and reversed the trend. Now the core staff (including leadership) have been in place for many years. This was identified as a key construct for this practice specifically to the behavioral health staff:

> *"We've had very little turnover of our behavioral health staff and that has made a difference."*

In discussing the importance of showing the value or worth of integrated care, participants shared some of the ideas that the practice is attempting to put in place:

"We try to look at more of the summative outcomes data; how many people we're seeing, how often, how many are repeat customers, and what's our no-show rates. We use as much data as possible to help characterize the operational management of the integrated behavioral health"

The comments also included that tracking these areas has been ongoing and fluid as the staff has not yet found the best practice in doing this.

"Things such as: are we growing? Are we shrinking? What other services should we utilize because this area is not being used as much as you know, x, Y, z area. We have face to face meetings and discuss these issues, but tracking our data feels cumbersome and no one really wants to do it.

Further, participants felt that the larger community may not know the integrated practice is around even after a decade. Participants felt that more people need to know how, where and why our integrated practice exists.

> *"In the general population aside from word of mouth, like there's not great advertising. I think we could do a much better job."*

Research Question 5: **What are the stakeholder perceptions for what actions need to be taken to move to a deeper level of integration?**

The future of this integrated care practice must address sustainability for the long term

Participants discussed how to address practice sustainability. Long term sustainability depends on several components including defining the current level of integration within the practice, those external and internal issues that need to be addressed and the desire/demand to sustain. Finally, there must be resources available to address sustainability, policy issues at the state and national level and those payor and reimbursement issues.

Study participants recognized the importance of the planning piece for future progress and sustainability:

> *" The future of integrated care requires a lot of planning. And many parts working together…to be integrated care"*

> *We must continue to identify the areas and gaps based on the clientele we're seeing and what their needs are."*

> *So integrated behavioral health is actually becoming bigger here because we are actually talking with parents and the children because they already come here as a PCP and how can we coordinate that care? Not that we don't offer it and we can definitely do the medication*

part, but it would be the therapy part. I know we have social workers who do, some of them do see children and some of them don't. But that would be another gap.

Participants also discussed what possible adaptations may need to take place for future practice modifications:

"And I think ideally, we would almost sort of have a hub and spoke model where if we have to refer someone, we have better lines of communication with someone. For example, someone with schizophrenia, we refer them to a higher level of care while still having solid communication and an easy way to manage what's actually happening with their mental health"

Another reflected on the reimbursement situation identified and discussed earlier as a gap, as something that needs to be addressed for sustainability:

"We need to make this all sustainable too, integrated care can possibly help keep people off the streets and out of the ERs (emergency rooms), But we need to somehow figure out a way to reimburse for case management."

Finally, participants felt that the concept of integrated care is where the future of healthcare is trending:

"I think everybody's thinking about how to do it {integrated care}. Some people are further ahead than others."

"Integrated behavioral health is actually becoming bigger because we are already talking with parents and the children since they come here to see their primary care provider and we discuss how we can coordinate their care, it's already happening we just need to expand."

Continued knowledge building: Funding streams, training, treatments that are evidence based

Other themes emerged for sustainability focused on continuing to build the practice members knowledge base in the areas of: fostering current funding streams and seeking out new

ones, training for new and tenured staff and understanding an adopting tracking to build the evidence for integrated care.

Participants commented that as the reimbursement plans are changing and unclear, funding must be solid to ensure a future for the integrated care practice. One participant reflected that waiting until the payers and reimbursement codes to catch up to care is not a prudent plan and that bolstering funding in the form of grants, contributions and other funding is necessary.

Currently, two of the larger contributors to the integrated program clinics are funding by the St. Margaret's fund and the resident subsidiary. This is necessary to make up for the financial gaps that occur due to the payer reimbursements. Participants said that sustainability for integrated care needs to have multiple sources for funding. One participant elaborated on an example that while still "new" could be a model to build upon for the future; monitoring the landscape and aligning with the need can provide a potential self-sustaining funding stream:

> *"We wrote a grant to get seed money to hire Drug and Alcohol counselors. We predicted this may have a positive impact because there's so much need. Then once we got them up and running and they built a service…now they're paying their own way. That portion of our integrated practice didn't need to be grant supported anymore"*

Several participants commented that training for staff, new as well as tenured staff should be ongoing to address treatment of all the needs of the community. The practice must continue provide training to those staff that have been with the practice for years as new treatments, ideas and approaches to integration are emerging. Study participants mentioned that as new concepts arise, they are discussed in the team meetings to allow staff and providers to decide on the training need. As new staff and providers come into the practice, training on the approach to integrated care and understanding the team approach. Finally, ongoing training for updates in technology should stay a priority as the needs for the practice adapt and healthcare evolves.

"When we have updates to our electronic health system, we have a point person who will then help us get acclimated to the changes."

"We will attend conferences to keep us update in our particular area of care, the social workers have their specific training, and of course the residents have their training.

"Some of our team members also teach at the university or have dealings at the hospital, this helps keep the practice as a whole on track with what's happening. If specific training is required, we bring that up at our meetings"

Study participants continued with regards to sustainability that using evidence-based treatments that are being presented at conferences and other updates should help foster integrated care as more commonplace for behavioral health versus an exception. The hurdle will be to find ways to track and present these treatments to build the evidence. One participant commented on the importance of using evidence-based treatments and interventions will help foster sustainability as the proof begins to mount because the question of impact will be addressed:

"I think that maybe having them use perhaps more evidence-based type of behavioral interventions, like treatments might be helpful."

"But there aren't any parameters for 'all services'. Like there are no quality indicators for evidence-based care outside of medical things. So, there aren't any achievable outcomes other than medical ones for evidence based or value-based care."

Divergent themes

While the findings demonstrated emerging and confirmed themes there were a few ideas that were divergent from the main ideas. The differing perspectives were around moving to a deeper level of integration and sustainability plausibility.

When discussing the future of integrated care in this practice while most participants felt it is working well, emerging perspectives on a single best model to fully implement is lacking.

"There are so many guidelines and ideas out there that it makes it difficult to adopt a clear path forward. It feels like we operate as an exception; figuring things out on our own."

Another diverging theme was the current state of integration and how the practice can move to a deeper level of integration. For example, when asked about how the practice can grow to a deeper level of integration, one participant felt that the practice was

"…at the top of where they can go with integration". We are doing treating the health concerns of our area through integration as best as we can"

Finally, on the subject of sustainability, some participants felt that it will be difficult to see too far in the future because the priorities of the larger UPMC organization is not as focused on behavioral health as the program champions are and that plans to sustain may just end.

"Obviously we need a way to make it sustainable from a system standpoint. I think it comes down to being able to show that financially it's feasible or maybe even profitable to continue to do it."

b. MEMBER CHECK

In November 2019, the researcher met with leadership of the integrated care team at UMPC-St. Margaret's to share finalized study results and co-develop recommendations for the health system to address findings. This member check meeting took place separately from the data collection and analysis phase and was used to validate the results. The participants' comments revealed that the data collected was relevant, important and they agreed with the findings.

Specifically, one area that was discussed was the importance of ongoing identification of champions for the integrated practice. Dr. Han (the original leadership champion for this

integrated practice) is moving up and will be less involved with patients but more involved with the program itself and will a bigger part of the leadership team and decisions impacting the integrated practice.

The vacancies that are created as staff and providers move up within the organization will be filled with internal candidates. The leadership members felt that upward mobility by promoting internal employees this will help continue to build dedication to the integrated practice and commitment to fostering champions. As discussed, early in the implementation of integrated care one of the lessons learned was the staff turnover was at least in part due to a lack of dedication to the shift in thinking to integrated care. By promoting from within, the leadership feels that this eliminates the question of dedication and understanding of the principles of integrated care.

Another area that was discussed as important was recognizing that one theme captured was the gap of social situations, social determinants of health and severe mental illness as being addressed as part of the integrated care. As leadership commented that since it was a theme that emerged it shows “the same page” thinking within the practice. The hope is that the more this type of information is captured as a gap in integrated care that in the near future there will be practical steps to address.

An emerging theme that was not specifically called out was the element of trust needed for the practice to be successful. This construct is understood that is needed as part of the communication and collaboration but not specifically stated by the participants. Leadership shared that during the case study research timeframe, a member of the staff (with the practice for several years not a new hire) needed to be terminated based on an ethics violation. Leadership commented that this was a good sign that this didn’t seem to influence the participants’ views

regarding the practice. The implication by leadership is that the trust and integrity of the team remained intact and that the remaining team members did not feel that it was handled improperly because this could have influenced the participants answers if they felt it was unjust.

Not necessarily a result of this research, however but confirmed that some areas of need were addressed. This also reinforces the finding of continual adaptation and implementation of new ideas, interventions and addressing community needs. For example, UPMC as an organization and as an insurance payer, addressed the issue of codes for treatment. It was captured that CMS has codes for integrated care, but the gap was that insurance payers did not update their systems to match the codes, therefore the reimbursement solution was not viable.

At the time of this member check meeting, leadership shared that the codes would be "turned on for use". This will enable the practice to bill for the things that they are already doing (without being able to bill) and for those areas that were already addressed by CMS. They will now be able to bill for areas such as the same day warm hand off, spending additional time with the patient, phone support and coordinating care with the psychiatrist or external areas. While still in the initial stages, they are not entirely sure how smooth the new approach will be but they feel this will support sustainability.

The group was pleased and surprised to learn that they seem to be the only integrated practice that includes pharmacy as part of the integrated behavioral health team. They would like to build on this and believe this will be helpful to UPMC organizational leadership as well as the greater team practice to learn about this. They feel this will be additional encouragement for what they are doing. One way they are building on this unique feature is building in additional training

with the pharmacist, for example, case managers/social workers are specifically working with the pharmacist. As a matter of good practice, the integrated team usually will train with the physicians to assist in collaboration; now the same type of training will occur with the pharmacist as well.

Leadership commented on the "current state" of the practice that while they generally function with somewhat seamless integrated care, that sometimes there is a tendency to slip into a lower level of treatment but that is dependent on the provider. This situation is captured as a divergent theme where a participant discussed that they felt this practice if functioning at its best and that they don't see a need to go deeper of a stronger level of integrated care. depending on the provider. Further, that while the residency program is viewed as a facilitator of the practice that the continual rotation of a new crop of interns each year can sometimes be tough; re-teaching information. For example, the first-year residents are focused on medical stuff and still adapting to that mental health needs to be on the radar.

Overall leadership is pleased to have reaffirmation of the areas that need to be addressed and those that should continue to be reinforced.

V. DISCUSSION

a. General Discussion

This study looked to answer the research questions for an exploration into an exemplar case of integrated behavioral health. The findings were from the practice members perceptions on integrated behavioral health care and then compared with the literature. The discussion of the findings from Chapter 4 are provided below; some of the major elements are mentioned in more than one research question. This strengthens these particular findings as not only a theme within this study but common throughout integrated practices. Themes such as: collaboration, communication, teamwork, ongoing and adaptive change are cited in much of the literature as main constructs of integrated care. Effective communication is central to team success and should be considered an attribute and guiding principle of the integrated team (IOM, 2012).

Further, the adaptive leadership that is threaded throughout the discussion points demonstrate that addressing the complex issue with some urgency is needed the longer- term goal or "story" must move parallel to be achieved. Each finding discussion provides insights into constructs of teamwork, communication, external and internal needs, etc.; however, the overall adaptive leadership approach is present in each: 1) Integrated behavioral health care in a system that does not yet universally support integrated care is an adaptive problem, 2)The challenge facing leadership is a complex issue that requires multiple pieces to come together and function comprehensively, 3) Change is a difficult process for most but integrating behavioral health into primary care requires embracing the collective knowledge to benefit the overall organization, 4) The ability to link the practice values, abilities and goals to that of organizational change by including all involved stakeholders; 5) Recognize when something may not be working and

adapting the process to address the need or sometimes having the ability to abandon the approach altogether if needed.

1. Finding: Current State of Integrated Care in this Case Study

a. Integrated care includes a culture change (or shift) where the patient is the focus

Findings from this study found that integrated primary care and behavioral health requires shifting from the traditional approach to care which is still focused on the fee-for-service model where the clinician/doctor is the decision maker with no real input on treatment decisions from the patient or the team. In integrated care, the focus shifts from the physician to the patient. This requires an entire culture change and shift in approach to care. The shift includes members of the practice, leadership, patients, caregivers, and the treatment team. One participant commented on the culture shift for this integrated practice: *"Integrated care is an intentional defragmentation of the healthcare system, our focus shifts to now addressing more aspects of the person's needs not just physical symptoms…if you are not willing or able to change your approach; integrated care may not be a good fit for you."* This culture shift approach is supported by the literature. Different approaches have been used to integrate care, but they share this trait: they design all stages of care delivery around what is best for patients (Sederer, 2014). This means that conversations are ongoing and inclusive for treatment; it is a new way of functioning and requires a time commitment to understanding this shift. It is worth the time and resources upfront to focus on team development to shift the culture. The value of focusing on culture change improves integration implementation, outcomes, as well as provider satisfaction and organizational learning. (SAMHSA-CIH, 2018)

As part of the new approach to integrated care; participants in this study found that in particular, "the warm hand off" was a priority for this practice. The warm hand off is important

to seamless patient care; introducing the behavioral health specialist for either a brief introduction or an intermediate discussion. Variations of "the warm hand off" is referenced in the literature but mainly refers to a referral practice wherein the medical provider introduces the patient to the behavioral health consultant in real-time (AHRQ, 2018). The patient has the familiarity of their primary physician as the main contact while getting introduced to the behavioral health side. Rather than a standard referral which would traditionally be external, fairly removed and at occurring at a different time; the warm hand off takes place immediately, allows the main primary care provider to be the conduit for the behavioral health introduction. This form of communicating is inclusive of the patient and limits patient apprehension, anxiety and confusion of meeting a new behavioral health provider.

Further, study participants commented that part of keeping the patient as the focus, patient engagement is essential for integrated care because communication regarding the treatment plan literally includes the patient as part of the treatment team. Patient engagement can inform patient and provider education and policies, as well as enhance service delivery and governance (Bombard, 2018). Encouraging a patient to speak up and participate lands squarely on the practice providers. Primary care providers are ideally placed to engage patients in a dialogue about their health conditions, circumstances, health needs and personal values and preferences. Informed patients are more likely to feel confident to report both positive and negative experiences and have increased concordance with mutually agreed care management plans. This not only improves health outcomes, but also advances learning and improvement, while reducing adverse events (WHO, 2016). Patient collaboration through encouraging engagement is central to collaborative holistic care.

b. Implementation of integrated care is an iterative process; it is not linear

As a practice goes through the initial decision to integrate; a readiness assessment is part of the decision-making process and is important to the implementation of the integrated care. This is noted in the literature referencing practice readiness for integration, the key features that will need to be in place as the practice assess the level of integration and the "ingredients" needed to function as an integrated practice (SAMHSA, 2019). Once the initial steps of readiness are assessed and plans are in place; the practice must continue to asses and recognize that adaptation is iterative and evolves and changes as does the practice, patients, community and larger healthcare landscape.

The case in this study and the literature use similar words to describe different things. For example, this practice uses the word "implementation" to include any adaptations or interventions that take place whereas they then will implement the change. This theme describes implementation of integrate care as ongoing because this case believes that the practice is continuing to implement new ideas and adapt to change. The literature is specific to implementation as the beginning stages of integrated care; this study found the concept to be iterative and on-going.

Implementation as ongoing (and nonlinear) is further explained as the regular monitoring of the practice and how it is continually addressing needs in this study. Areas such as payment models, external as well as internal health care changes must be part of the regular ongoing assessment process. The healthcare landscape changes as such so must the practice to meet the needs of the community. The literature confirms that it is imperative for integrated care practices to monitor change and adapt. Integrated behavioral health responds to ongoing changes in the health care system, as rising costs and concerns about quality of care have led to wider use of the

patient-centered care (AHRQ, 2019). The idea of implementation as ongoing is probably better understood as the adaptation to the changing landscape. However, the perceptions captured in this research refer to implementation as ongoing because the practice continues to implement new ideas to address the needs of the community.

2. Finding: Description/Definitions of integrated care in this Case Study

a. Integrated care is all-inclusive care that can provide holistic care with reduced stigma

Integrated care is described in study results as an all-inclusive approach to care focused on the patient to address all their health needs; where communication and collaboration are key to patient care. This description aligns with SAMHSA in defining integrated care as "the systematic coordination of general and behavioral health care…to address complex health care needs…" This requires a team approach to the patients' health needs; each treatment team member has a role. Integrated care can be viewed as an investment in shared responsibility (Lardieri, 2014). The case in this study also asserts this concept. Each team member, including the patient, participates in their treatment plan. There is a shared responsibility for the outcome of the treatment plan that is agreed upon and each person is expected to deliver on their part.

Having the team co-located is part of the description of the integrated practice in this study. Co-located describes the physical proximity to each other; having primary care and behavioral health care near each other. In this case, they are located in the same building, share the same waiting rooms, patient rooms, conference rooms, front desk and staff. The co-location of the integrated practice helps to facilitate the team approach that is expected from integrated care. It is far less complicated to have discussions around patient care when you can easily be together in meetings or in the hallway, for example. An added benefit, that was really recognized

after the fact, is that co-location can address stigma associated with behavioral healthcare. Participants in this study felt that by having primary care as their main point of contact, stigma may be reduced by not having to go to a dedicated behavioral health facility. Patients sharing the waiting room are unaware as to another patients' purpose for their visit. This idea is recognized in several sources in the literature but captured here; "integrating behavioral health and primary care can improve the patient experience….while equating mental health with other physical illness and help to decrease the stigma within the health system" (Shim, 2013).

3. Finding: Strengths and Gaps of the integrated model in this Case Study

a. Strength: Collaboration and communication enable comprehensive care

The strengths cited by the literature for those integrated care practices that have had success in achieving their goals are focused on collaboration and communication at the center of care. Additionally, teamwork is paramount to facilitate the communication and collaboration within the practice. (Lardieri, 2014) The practice in this case study has open and ongoing communication and active collaboration involving all team members. This strength seems to be one of most common mentions during the research. Whether answering the question about strengths or answering another question during the interviews most participants discussed the communication and collaborations as a key reason they feel they operate in a seamless and effective way.

Communication and collaboration must be in place in order for comprehensive care to be achieved. The ability for all staff to have a voice to discuss patient care is a concept that continues to strengthen the integrated practice. Integrated healthcare is often thought of as interprofessional healthcare, an approach characterized by a high degree of collaboration and communication among health professionals. (APA, 2019). In traditional practice, the physician need not

necessarily discuss the treatment plan prior to making the decision. It is also not unusual in a traditional practice for each role (for example, nurse) to stay in the nurse role with the typical tasks and duties. Observations, discussions and input on the treatment plan is not part of the traditional fee for service primary care appointment. With the integrated practice, including this case study, input and discussion is an expected approach and one that creates an environment of better care based on teamwork and communication. One participant provided an example referencing a patient with bipolar disorder who would become manic every summer equinox. The case manager knew this patient's situation and communicated this with the rest of the team. Through their communication, collaboration and teamwork, they were able to schedule her prior to the weather change, have her seen by the team and treated; as a result, she was prevented from going to the hospital. This example provides insight into how communicating with the team (including the patient) is encouraged and ultimately rewarded by providing good patient care.

Further, communication and collaboration are mentioned as a strength within the "e-consultation" where the primary care provider or case manager has the ability to consult with the psychiatrist when a face to face meeting with the patient is unnecessary (for example to confirm a prescription dosage change or medication change). "E-Consults" show promise as one means of supporting PCPs to deliver mental health care to patients with common psychiatric disorders (Lowenstein, 2017). While this form of communication relies on the technology of the practice, it provides another avenue in communication and facilitates good patient care. In many cases the primary care provider can have an answer to their behavioral health question before the patient leaves the practice. In most cases, answers are provided within twenty-four hours. Collaborative decisions in patient care can be handled in an efficient way for the patient and practice alike. In this case study the "e-consult" process allows the psychiatrist to assist in the management of

certain patients much faster than the "old fashioned" face to face consult. As one participant commented: *"The e-consult has been unique and a very nice addition to our integrated behavioral health program."*

Finally, there are times when the integrated practice may not be fully equipped to serve a particular need; when that occurs, it is important to foster communication and ultimately collaboration outside of the internal organization (Buch, 2018). There are situations that occur with which the integrated practice in this study is unable to address; for example, that will need a referral to an external specialty. It is at these times that acting as a bridge to make the external connection becomes as important as the internal collaboration. One of the strengths of this practice is the ability and desire to make that connection and work through the referral with the patient. Participants reflected that it is in these times they feel that part of their job is to make sure the patient feels comfortable and treated with respect. This further solidifies this construct as a strength of this practice as well as that of integrated care because communication and collaboration happen naturally even when outside of the integrated practice itself.

b. Strength: On-going problem solving and responding to patient and community needs

Previously explained in the theme of implementation as ongoing, this research describes as a strength the continual addressing of situations to their integrated practice. Further it is worth noting that communication and collaboration needs to be present in order to address situations that arise within the integrated practice. Both the formal and informal communication are key constructs to address change in a timely way. As healthcare continues to evolve and the landscapes change, the integrated practice must evolve and adapt to those situations to continue to be a viable practice. Regardless of where an organization starts, the commitment to continuous

improvement and enhancement of services needs to be a core component of the integration process (Ratzliff, 2016).

An important factor occurring nationally and locally is the opioid crisis which has impacted communities as well as the healthcare system. Recognizing there are limited resources to address a growing problem and adapting to this situation is one of the strengths cited by the participants in this study. Understanding the community, listening to the issues and having the capability to communicate to leadership a potential solution is a strength of integrated care and of this practice. For example, in this case, it was the behavioral health social workers that took their idea to the team meetings and eventually to leadership to pursue a grant for medically assisted treatment for substance use disorder. Within months the decision was made, the necessary steps were taken and the grant funding was awarded. This adaptation of the practice, which now is financially sound apart from the grant, includes MAT specialists as part of the integrated team. Communicating and collaboration was the conduit for addressing this need.

c. Gap: There is not a standard or simple way to measure success or track outcomes

As practices continue to explore integrating care, being able to show proof that it works has become a gap. In the literature, there are some standards to measure such as decreasing ER visits and improving depressions scores but there has yet to be a standard tracking tool (McDaniel, 2014). The theory is that as more patients have their behavioral health issues addressed in the primary care setting, this will lead to improvement in depression scores and a decrease in emergency room visits. The gap, as referenced in the findings, is in having resources to track outcomes in a timely way with ease. In order for true transformation to take place,

practice change with measurable outcomes is important as well as being able to adapt if the expected outcome is not met (Raney, 2015).

Further, there are other areas that this practice would like to track such as overall improvement in health, an increase in well visits, improving chronic illness, and improving other behavioral health areas such as addiction, anxiety. However, without dedicated resources (tools, time, finances, knowledge) there is an uncertainty as to how to track success, failures and outcomes. Each integrated care practice may have elements that are important to that specific practice that may be difficult to measure.

The use of electronic health records provides a way to communicate regard the patients record, however, the system lacks an effective way to communicate in real time which leads to duplicative efforts There isn't an efficient way to track the aggregate patient data to help understand the impact of integrated care and show the value of the integrated practice.

d. Gap: Social Services like housing, transportation and employment are not addressed

It is widely recognized that social factors, such as unstable housing and lack of healthy food, and unemployment have a substantial impact on health outcomes (Mahadevan, 2015) .One of the more common gaps is addressing the social issues needs for the patients of this busy practice. Social issues make it more difficult for patients to care for themselves.

The inability to bill payers for the time it takes to assist patients with the social issues adds to confounds the impact of this gap. For example, helping a patient fill out their insurance papers impacts the financial perspective in two ways. First, it takes time to address the issue and take care of patient #1, but it also takes time away from patient #2 who has a billable appointment. Inevitably the provider takes personal time at the end of the day or during breaks to address the social issues for their patients. This is an issue that impacts most primary care offices

but when it is an integrated practice where the goal is holistic care, it impacts the practice future as well. The literature focuses on providing ways to provide for codes for behavioral health, and behavioral health services, as well as how other non-physician providers may be able to code for billing situations (Integrated Behavioral Health Partners). However, there is little information on what to do about the time spent on helping patient with their social situations.

e. Gap: Not equipped to address other areas of need such as certain types of therapy, severe and persistent mental illness (SPMI)

As supported by the literature, there are gaps to care such as long-term therapy for certain types of patients such as group or family counseling, treating children and those with severe and persistent mental illness (such as schizophrenia or bipolar). Since these categories of patient types require a specialized area of treatment, the resources at the co-located level of integrated practice are not allocated. The literature recognizes that patient centered medical homes or those practices functioning at the higher levels of integrated care (fully integrated- transformed practice) may be the type of practice that can include holistic care for these special populations (SAMHSA, 2019).

In this integrated practice, inevitably there are patients in need of long-term therapy for instances with family issues, children and/or a group therapy opportunity. Integrating care for these special situations takes more resources than this practice can provide. Unfortunately, it is not only an internal integrated practice issue, behavioral health resources for long term talk therapy are limited locally, regionally and nationally. Ongoing therapy, as the name implies, requires an indefinite amount of time not only in the therapy "intervention" but also the sessions themselves are time-consuming. Additionally, group therapy creates other conflicts such as scheduling and infrastructure space. Family and children treatment need experts in these specialized areas. In this case, these gaps were identified as areas that needed additional resources if they were to be addressed. These gaps are supported by the literature as issues

Another common gap of integrated practices is addressing those patients with severe and persistent mental illness such as schizophrenia and bipolar disorder. These chronic illnesses require specialized psychiatric care. Having the resources in-house to address these patients is inadequate. The evidence base for models that target individuals with SPMI has not been the focus of most integrated care models. The literature providing for how this issue is to be addressed is limited.

Issues such as these are part of a larger gap; the health system itself. Behavioral health is generally a financial loser for a health system, it drains the resources due to re-admissions, under or uninsured and the limits on billable hours. Further behavioral health issues are chronic and have long term things to contend with not the least of which changing medications, acute issues and lack of providers equipped to handle SPMI.

4. Finding: Vision v. Reality of the integrated model in this Case Study

a. The vision and goals of integrated care should be clear so they can be realized

There is a general understanding of the vision of integrated care such as it is the best approach to caring for people with multiple healthcare needs. However, participants were reluctant to comment on what the actual vision of UPMC is as well as the greater vision. While there were common themes that emerged as captured in Chapter 4, a solid vision statement was not produced by the participants. Since the vision is unclear, it makes it difficult to know if the vision is realized in practice.

Further, the reality is that even as the vision statement can be provided and understood it does not mean that the vision will be achieved. The simple desire to want it to be so does not mean the resources or capabilities are available. It is assumed that there is a clear path to achieve the vision which is simply not true.

Similarly, to the vision, the goals of integrated care need to be clear. What the practice wants to achieve should be laid out plain and simple so that the providers know what they are working towards. Addressing community mental health needs by screening for behavioral health issues during intake of new patients and ongoing with existing patients is a goal

Understand the demographics of the community the integrated practice is part of and shape the clinical goals to those needs and demographics. Having this as a clear goal allows the practice to dedicate time to monitor and address the community issues. The goal of addressing community needs is addressed by integrating care.

b. Implementation strategies and tactics should align and be achievable

After the initial implementation of integrated care there is an ongoing process that must take place as the participants discussed. Strategies and tactics to make the ongoing process seamless must align and be achievable. The alignment should be with the organization and the healthcare landscape. The larger organization has financial responsibilities and areas that may not always align with the integrated practice. In this situation, the integrated practice wants to continue to grow and expand, addressing those needs of the community; but also, to be a thriving practice. If the implementation strategies do not align with the larger organization this would be difficult to achieve expansion and a deeper level of engagement with the community without their support (McDaniel, 2014).

5. Finding: Barriers and facilitators of the integrated model in this Case Study

a. Barrier: Historically healthcare is siloed and separate

Behavioral healthcare has typically been separated from medical and physical healthcare. However, not just the behavioral health part, most healthcare operates in a siloed system. Each

specialty or chronic condition has a separate pathway with separate billing process and separate records. This historical separation stymies integration because integrated care is different but also takes effort to bring the separated systems together. This legacy {of separate care} has created barriers for patients and providers and made it difficult for practices to collect revenue to support integration of behavioral health services into primary care (Hemming, 2018). Further, within the integrated practice it was discussed how the shift in thinking from individuality to teamwork and collaboration takes commitment and effort; the same scenario is true for the healthcare system itself. This creates a barrier for billing, communication, and ultimately effective patient care. Changing the health care landscape is an enormous undertaking that takes commitment from all stakeholders including Medicaid and other payers. It takes commitment from providers and policies. Historically, with separate insurance, different methods and amounts of payment, and silos between clinicians, mental health care has been isolated from the rest of the health care system, making it hard for people to access (Press, 2019).

This innovative approach to care creates unanticipated barriers as well such as from accrediting bodies. Practices, providers and systems need to be evaluated to ensure they are in check with the duties put forward by the accrediting organization. However, as some organizations are finding there isn't a clear set of steps to assess the integrated team. Since one individual is not necessarily responsible for the tasks that should be aligned with the accrediting check list, it creates a situation that has not yet changed to fit the integrated practice.

b. Barrier: Reimbursement for integration is generally not supported externally and funding can be difficult

Integrated practice like any traditional practice relies primarily on the ability to bill insurance to maintain financial stability. However, the reimbursement system is by a large part still set up as fee for service. As the Center for Health Care Strategies, Inc explains, "the

integrated practice appointments are more complex to address several health issues at once. Aligning financing and payment can prove to be a complex situation." This means that in many if not most cases there are situations where the practice is contributing to good patient care but there is not a path to bill for all the tasks.

While progress has been made; CMS (Center for Medicaid Services) has released updated codes to incorporate the integrated approach to care; not all payers have adapted. The barrier that remains is that insurance companies, such as those in the private sector or Managed Medicaid contracts may not have updated their systems. In Pennsylvania, the payment structure is Managed Medicaid; (MCOs contract with Medicaid to be the insurer) where the contracted payer providers have not updated their systems. Therefore, UPMC still cannot bill for the behavioral health portion of the appointment. This directly impacts the financial bottom line for the integrated practice.

Since reimbursement from payers may not be a reliable source for timely payment due to the reasons discussed above, alternative ideas must be considered for funding. However, the alternative sources can be equally as unreliable such as grant funding or philanthropic giving. These alternatives, while providing another potential source of funding can be time consuming and certainly not guaranteed.

c. Facilitator: The UPMC residency program supports integrated practice

As discussed, financial stability through the traditional reimbursement route can be unreliable. Therefore, seeking out new ways to help financially sustain the integrated practice becomes necessary. This practice is affiliated with the larger UPMC health system and the as such the Medical Residency Program at UPMC hospital. As part of the residency program the

primary care residents will rotate through the integrated practice as a provider for three years. The residency program supports the integrated practice in several ways; teaching the new providers the integrated approach, the residents are a resource that is paid for by the hospital, and the program subsidizes the integrated practice with funding. Integrated practices must continue to look for innovative ways to financially support the new approach to care (Lardieri, 2015).

d. Facilitator: Champion(s) are paramount to the success of integrated care

A theme that is captured in this study as well as supported in the literature is that a champion for integrated care is necessary. As discussed, the shift from traditional care to integrated care takes many hands working together, many sources focused on a shared goal, various stakeholders coming together and working in tandem to achieve effective patient care. A champion who is committed to the initiative is necessary, but having the right champion is the pinnacle to success. From the beginning of the integrated care to the ongoing practice of continuing to push forward the champion (or champions) are needed to guide the program. (Miller, 2013) The champion or champions must be committed to the program but also embody traits of a humble leader ready to motivate and essentially defend the integrated practice and all those within it. Champions may include either individuals or existing work groups, but they should be situated throughout the organization and empowered to bring about change in specific ways (Raney, 2015). Continual identification of champions to address the change and engage them to foster commitment to the process. The integrated practice should prepare for the future and in doing so should identify existing champions but also those who may be able to carry the practice once the strongest champion moves on (McDaniel, 2014).

e. Facilitator: Team Meetings are the cornerstone of communication and collaboration for integrated success

Communication has been mentioned throughout the study and confirmed in the literature as a major construct of an integrated practice. The forms of communication are common such as emails, verbal, memos, phone calls etc.; however, capturing the communication and collaboration efforts should have be structured so to allow for both informal and formal communication. This practice relies on team meetings as a major element for collaboration within their integrated care team. They have multiple types as discussed in the results section; each having a set purpose with an agenda as well as minutes, follow up and meet on a regular basis. The meetings provide a venue for the specific team members to collaborate, multidisciplinary team members to collaborate and on a local level the practice specific team members to collaborate. Without these ongoing and important meetings, the integrated care would not survive. The literature reinforces the team meetings as a common sensical way to communicate and collaborate. Sources also discuss the importance of nurturing the team meetings. Changing expectations and goals combined with personnel turnover requires continual nurturing of your team and constant evaluation at the operational, process, and interpersonal levels (SAMHSA, 2019).

6. Finding: Lessons Learned of the integrated model in this Case Study

a. Formal team meetings are the cornerstone of capturing lessons learned

Again, as discussed, team meetings are the cornerstone of integrated care. In this practice, participants mentioned the meetings are how they capture the lessons learned. The review of the minutes either recently, ongoing, or archived are the reasons that mistakes or areas for growth are not overlooked. The agenda and meeting minutes are kept for reflections and address any key lessons learned. Some of the key learnings that have come out from these meetings are the culture shift and what that means moving forward, how to address it. As part of the culture shift, teamwork and compromise are key elements of the integrated care. And how employing the

residency program helps the practice, but also what that means to the team, the practice and the patients. The key element here is that the formal team meetings provide the platform for the collaboration but also as the main construct for capturing lessons learned. Reinforced within the literature is the importance of team meetings and using them as a platform to capture lessons learned. SAMHSA suggests, "Consider sharing data regularly at provider meetings and engage the whole organization in quality improvement activities to foster your high functioning integrated care team. Regularly revisiting your shared vision helps orient new team members and reinforces what you're trying to do." (2019)

b. Adjustments and adaptations of the practice, approach, perceptions and attitudes are ongoing

As the practice becomes more well versed in the integrated practice the adaptations also continue. Recognizing and documenting the changes and addressing the needs is a continuous process. Early on in this practice turnover of staff was an issue. However, leadership took the initiative to understand what was happening and addressed the issue. Recognizing that longer term staff may not have been ready to integrate and preferred to stay as a traditional practice, it was ultimately mutually decided that they were no longer a good fit for this practice that is integrated. The key learning from this early situation was that not only the importance of assessing your resources (in this case people) but documenting the process and making necessary changes must happen. Additionally, when bringing on new providers and staff making sure they understand the purpose and vision of integrated care. The progress being captured should be specific on what needs to be addressed, details on why it should be addressed and the plan for change. (Lardieri, 2014). It is important to document and track the progress of the practice integration so that those changes that are having an impact are captured (Miller, 2013). The practice should be able to draw upon past experiences with previous changes and document what

worked and what could be improved. Finally, it seems relevant to point out that lessons learned from failure, though not always rewarding to share, are at least as important for future development as documented success (Buch, 2018).

7. Finding: Future Planning of the integrated model in this Case Study

a. The future of this integrated care practice must address sustainability for the long term

Sustainability for any practice is necessary but with an integrated care practice special care must be considered for strategies and assessments for how the practice can continue to be integrated well into the future. However, as captured in the literature, evaluation of the effective features of care coordination and overall sustainability of integrated care models is still under development (Sederer, 2014). It is a common theme within this practice as well as the literature that reimbursement is key to sustainability. It was identified as a gap, discussed as a barrier and is even though mandatory for any future practice, is reliant upon outside sources; payers, policies, other funding source. Developing a financing approach that can support a successful integrated behavioral health model is frequently noted as a challenge by providers. Financing integrated care requires a careful examination of the type of insurance coverage connected to the patient population in order to maximize available revenue and identify the ideal partners (McDaniel, 2014)

While the literature discusses integrated care as a possible solution to lack of resource allocation in behavioral health, it requires many stakeholders working together both internal and external to the integrated practice. Our current health-care system is a failed system, integrated care is the opposite of our current system; however, promoting integration widely will require both psychological and medical education (Davis, 2013). As discussed in this study as well, there

is not a clear path to the future of integrated care however participants felt that it is trending towards an alternative to the lack of resource allocation in behavioral health.

b. Continued knowledge building: Funding streams, training, treatments that are evidence based

Future progress of integrated care has many elements that vary amongst the different models. However, continued knowledge building for future planning is cited. Sustainability planning is often cited as a "must" for the future of integrated care so that they can continue to expand. Nevertheless, because integrated behavioral health is not yet foundational to the way care is delivered, organizations that fail to make the necessary investments to sustain efforts may risk failure (Raney, 2015).

8. Finding: Divergent Themes of the integrated model in this Case Study

While the findings demonstrated emerging and confirmed themes there were a few thoughts that were divergent from the main ideas captured in the findings. The differing perspectives were primarily around moving to a deeper level of integration and sustainability plausibility.

When discussing the future of integrated care in this practice most participants felt the current state of integration is working well, however, participants commented that a single best model to fully implement and move to a deeper level is unclear. There is evidence and resources to guide a practice into integration but not a single best model to follow when looking to move to a deeper level. Most of the guidance provides readiness assessments and implementation plans but there is not much evidence on next steps. One participant described, *"It's difficult to know not just what we should be doing at any level of integration but how we are supposed to continue to evolve and move to full transformation."* And another commented*, " There are lists and core*

competencies that are mentioned at each level but no real guidance on how to logistically, financially and otherwise to achieve them." There are best practices and anecdotal information available on various websites including SAMHSA, but they are sometimes overwhelming and unclear in directive capability.

Additionally, one participant felt that this practice has already achieved the best level of integrated care that's realistic. *"I think we are already functioning at a high level of integrated care, what else would we need to do; what else can we do…?"* The participant further elaborated that while it is understood that there are areas that may not be addressed in this practice; lack of resources and capabilities will limit any deeper movement. Further, they are already addressing behavioral health issues in the community as well as primary care and that is more than other practices.

Finally, on the subject of sustainability, some participants felt that it will be difficult to see too far in the future because the priorities of the larger UPMC organization is not as focused on behavioral health as the program champions are and that plans to sustain may just end. *"UPMC has it's organizational sights set on [organ] transplantation, cancer, heart disease; areas that will be more financially fruitful if not just better understood [by the Board]".* Many health systems are continually looking to differentiate and stand out to be the hospital/system of care of choice. However, they also have a financial responsibility to the shareholders and the Board of Directors and integrated behavioral health practice is not easily understood by those making the decisions on how it can potentially reduce costs and improve overall care.

b. REVISED LOGIC MODEL

The original logic model captures the integrated practice itself based on the literature search. The revised logic model includes the findings from phase 1 of this research. While significant changes did not occur, things such as the language used, and the particular constructs outlined in the case study documents are reflected in the revision. The changes to the logic model reflect the language used in the documents and are similar to the changes that occurred in the revised conceptual model. Specifically, the changes that occurred under the heading "Inputs/Activities" are: 1)Determine Need/Diagnosis changed to include Patient Health, 2) Culture Change was revised to include Adaptation, 3) Upstream Techniques changed to Future Planning. The themes of Communication and Collaboration and Team Meetings remain separated because more details were called out under theme even though they are related and combined in the conceptual model. Other revisions include separating out the factors into practice modifications and systems modifications for more clarity under the "Short-Term Outcomes" heading. The reasoning behind the revisions was to make the logic model more streamlined with the conceptual model which provides the framework for the research study. While the conceptual model shows the research, the logic model demonstrates the integrated practice with more detailed specifics; and how each step logically informs the next.

The revised logic model is provided in Appendix 11 and the table below shows the themes captured from the documents, the aligned references and how they fall within the areas of the logic model.

Table VI: Themes Captured and Aligned References

Phase 1: Content Analysis Themes	**Aligned References**
NEEDS/CONTEXT ***Integrated Care (Define, Described, Characteristics):***	
Vision of Integrated Care-practice goals and objectives Vision v Reality of Integrating BH into Primary Care-	Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Characteristics of the integrated care practice Definitions of integrated care	Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018); The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); PHQ-2 Screening Tool
Core Principles	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)

Program Design	Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018); The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010);
INPUTS ***Integrated Care Strategies and Activities/Process and Techniques***	
Communication/Collaboration	Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Culture Change	Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Identification of Challenges that create barriers to integrated care	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010)
Workforce-who is involved in the integrated care	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010)
OUTCOMES ***Integrated Care Outcomes: Achieved, Perceived, Desired***	

Short Term: Practice Modifications Culture Reimbursement	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Intermediate Including more specialties Expanding the practice	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)
Long Term Sustainability Reimbursement and Finding Communication and collaboration external Able to identify and treat gaps identified	The Implementation of an Integrated Behavioral/Physical Health Program at the UPMC St. Margaret Family Health Centers – Funding Proposal (2010); Poster Presentation: Integrating Behavioral and Physical Health in a Residency Family Health Center (2013); Integrating Behavioral Health into Primary Care: Real World Applications Presentation (2018)

C. REVISED CONCEPTUAL MODEL

This study began with the idea that there were certain factors that impacted integrated behavioral health care which is reflected within the conceptual model pulled from the literature review. The assumption with the original model was that this practice is functioning at a strong level of a co-located integrated practice and is looking to transform into a fully integrated transformed practice. While future transformation is the vision of leadership within the integrated practice; the exploratory nature of the study revealed areas that need to be addressed both internal and external in order for a deeper level of integration to take place. While the larger conceptual model has not significantly changed some of the constructs within the "cone of study" are adapted to reflect the findings from the research. Several modifications were made to the conceptual framework because not all of those factors and sub-factors on the original framework influenced the integrated care practice and as a result, the conceptual framework was updated, and the changes were highlighted.

The revised conceptual model provided in Appendix 12, calls out the "cone of study" which represents the case itself; the integrated practice within the UMPC health system. The original framework depicted the external factors (national, state, UPMC) that impact the integrated practice. The updated conceptual framework mutes the colors of the national, state and UPMC purposefully to further highlight the area of study.

While the external rules, regulations and laws at the national and state level impact the integrated practice, that is beyond the scope of this study. These constructs were left in the conceptual model to acknowledge their role on integrated behavioral health care practice. Similarly, the political landscape impacts the national, state, health system and integrated practice which can influence operations at every level.

The UPMC Health System construct calls out the "organizational" and "provider" factors that also have an impact on the integrated practice and impact how the integrated practice operates. Captured within the participants perceptions are that of the priorities, policies, funding and residency program impact the integrated practice. These are updated based on the language and perceptions of the participants.

Within the "cone of study" which is explicitly called out as the UPMC Integrated sites includes the factors that are captured within the current level of integration. Additionally, as with other sections of the conceptual framework, the language was updated to reflect that of the participants within the study to better represent the case environment. For example, the original conceptual model used the language reflected in the literature which highlighted competency categories within an integrated practice. The construct of "cultural competence & adaptation" remains unchanged as this was the language used by the participants; however, the other constructs changed either by being combined or as new construct labels to better capture the practice language. The constructs of "interpersonal communication" and "collaboration and teamwork" were combined to become "collaboration, communication and teamwork"; the constructs of "intervention", "screening and assessment" and "care planning and coordination" were replaced by the new constructs of "patient health", "multidisciplinary providers" and "social issues". Finally, new constructs of "documenting lessons" and "reimbursement and funding" were added based on the participants responses. The constructs of "social issues" and "reimbursement/funding" were purposefully placed straddling the UPMC Integrated Sites, UMPC Heath System, Pennsylvania State constructs as these represent both internal and external impact. The constructs within the UPMC Integrated Sites bubble are those factors that are impacting the current level of integration however, they will also play a role in the "future state"

of the integrated practice. Finally, arrows were added to surround the outside of the UPMC-Integrated Sites to demonstrate the adaptive learning of the practice. This was a key theme that emerged throughout the participants responses in the study.

d. LEADERSHIP IMPLICATIONS

1. This Practice

This practice demonstrates what Peter Senge describes in his book The Fifth Discipline (1990) as a learning organization by using adaptive leadership. This integrated practice effectively demonstrates what Senge refers to as the five basic disciplines; systems thinking, personal mastery, mental models, building shared vision and team learning. As outlined in the findings and again in the discussion, this practice has an adaptive approach to identifying issues, addressing them and adapting the practice to meet the needs of the community. This research will be a source of information for this particular case by confirming areas of strength, opportunities for growth and barriers and facilitators for integrated care.

When this practice first implemented integrated behavioral health care over a decade ago, there were limited resources to fully understand the path forward and what to expect from integration. Through this case study results and discussion points, it is important to recognize this practice has provided evidence that actual integration has occurred here beyond just the structure coordination. As the practice continues to grow, evolve and adapt the information captured in this study is personalized to their practice. This study will serve as a snapshot from the integrated provider perspectives to which the practice can use as a resource to address areas that need to be addressed and further strengthen the things they are doing well.

2. Other Practices

This research will add to the body of evidence for those practices either already integrated or those that are looking to implement integration. The research that currently exists in this space is broad and somewhat vast, however, the fact remains that there are barriers that are still preventing integrated behavioral health as a standard mode of practice. This case highlights a practice already integrated beyond just structural coordination and will provide another example so that other practices can make an educated decision on how other practices work. Further, the adaptive learning approach used in this integrated case study highlights the importance of leadership in guiding the practice as a team, having clarity of vision and focusing on holistic care.

3. Future Research

This study will add to the body of evidence for studying integrated behavioral health care established an additional resource for future implications of study. From a systems perspective healthcare reform provides reasoning and initiative to have a streamlined system of care. However, when there is a burden of fragmented care as there is within the mental health sector, this can negatively impact access to care. Treating behavioral health as part of an integrated system and identifying reasons behind access issues and working to address these gaps may help ease the burden of mental of resource availability from a mental health care access to services standpoint.

e. RECOMMENDATIONS

1-Build the case for why social services must be part of the business model

As discussed, social services play a large part in overall care for patients and directly impacts the practices ability to deliver the best holistic care. Being able to bill for the delivery of

all the care provided is paramount to sustainability. This practice has recognized that being able to bill and be reimbursed for addressing social situations is necessary. However, the need remains to build the evidence to demonstrate why social services must be included as part of the billing process.

Evaluate the current billing situation and research a way to bill for social services so that the time spent on assisting patients is reimbursed allowing for financial stability and positive attitude towards helping patients in a true holistic integrated care fashion. The literature provides for some guidance on coding for behavioral health codes that can be used from a CMS standpoint, however there did not appear to be any guidance on billing for social services. AIMS stipulates on the update provided on the website, "*Remember to check with your state and all payers to determine the necessary qualifications for the designated billing providers. Not all states or payers reimburse for every code".* This further demonstrates the difficulty in billing issues. This is an issue that exists in this practice as well as other integrated practices and is a key issue that impacts the ability of the practice to sustain financially. Further research is needed to fully understand the scope of the impact and address this from a national policy standpoint.

2-Expand on the innovative approach to integration of the pharmacists as part of the integrated care team.

The clinical pharmacist is already part of the integrated care team at this practice. It is somewhat unique as compared to other integrated practices and plans should be put in place to foster this approach. Documentation showing this innovative model including why it is important to include the pharmacist as part of the team should be complied and stored. Additionally, there are some new adaptations that have occurred in the residency program which includes a type of cross-training with pharmacists and the integrated care providers.

These innovative and adaptive approaches already in place at the UPMC clinic foster the strength of integrated care; however, it needs to be formally documented. The literature supports this innovative approach to assist with the overall management of the patient's health. Medication management, provided by a clinical pharmacist, was associated with a statistically and clinically significant improvement on several MH disorder rating scale scores (Harms, 2017). Including the pharmacist also improves the providers confidence level in treating behavioral health issues. Published provider satisfaction survey results showed that the involving pharmacists as part of the team was valued and that providers felt their comfort in prescribing psychotropic medications improved due to this approach (Chavez, 2019).

The recommendation for UPMC is to formally document the processes that are taking place and promote this innovative model to add to the body of evidence supporting this approach. The process that has already commenced has shown adaptive leadership through including the pharmacist as part of the integrated care team. Further, the residency program has now included the pharmacists training in integrated care; the steps and process to achieve this should be documented and shared for others to expand on this concept. Finally, expanding this innovative approach to further aid in achieving a deeper level of integration is the overall recommendation. The adaptive leadership already demonstrated will foster this process.

3-Design an integrated performance reporting plan

The literature provides for several resources in measuring outcomes or "success" of the practice. Including one article that specifically reviews several instruments for measuring integrated care (Bautista, 2016). However, it appears that these are suggestions from a multitude of resources and there is not a singular standard that resonates with every practice. Further, the less-studied constructs (e.g., continuity/comprehensive care, care coordination/case management)

and domains (e.g., professional, organizational, system, functional, normative integration) need to be investigated further.

There are many instruments used for measuring constructs of integrated care and it remains the decision of the individual practice to adapt the measurement tool to their practice. As stated in The Millbank Quarterly (Bautista, 2016) they found 209 index instruments measuring different constructs related to integrated care; yet the strength of evidence on the adequacy of the majority of their measurement properties remained largely unassessed.

The recommendation to UPMC integrated care would be to narrow the scope of measurement tools to what constructs of the practice would provide the best opportunity to measure and then adapt that tool to the practice. Once the specific tool is adapted design a plan to put this measurement tool in place to assist in collecting, organizing and reporting the data. This performance report will aid the practice in sustaining and potentially expanding services by offering more evidence for integrated care.

f. LIMITATIONS

This study was an exploratory exemplar case study therefore it is limited in its generalizability. However, the findings from this study will add to the body of evidence and there is potential for transferability to inform practice integration in other contexts.

There is the potential for confirmation bias which can be thought of as a form of selection bias since the researcher had an understanding of the integrated practice background and has experience in the behavioral health sector. The tendency may have been present for inductive inference from the documents, focus group and interviews toward information that confirms the researcher's preconceptions.

With qualitative research there is exists the potential for researcher bias. To address the biases, quotations were used when applicable to support the interpretations. Member checking was completed with the leadership to validate the findings as a result of their respective interviews.

The qualitative interviews were self-reported by the integrated care providers and staff around their perspective on this integrated care practice which is limited by their own scope and role within the practice. This has the potential for potential reporting or response bias based on each individual's experience. Additionally, the semi-structured design allowed for free-flowing thoughts that while adding to the overall substance of the qualitative evidence may have blurred the lines of structure.

Similarly, there was a potential for recall bias. Qualitative responses relied on knowledge and recall from the stakeholders related to details that have led up to the current state of integration as well as the vision which may have been challenging to recall over the course of a decade.

The researcher has a background in public health and identified the potential topic based perceived disconnect between public and mental health systems which was the impetus for the study. As a result, the researcher decided to focus on a specific case that has been integrating care for over a decade to better understand how they have made this sustainable to address community need. Also, memos were developed after the interviews and reviewed with others to determine if the findings aligned with results and noted the objective results and separate any potential feelings or biases.

VI. CONCULSION

Behavioral health care faces access issues and although healthcare systems are starting to make some progress through integrated care clinics, examples of actual integrated care are limited. Study findings collected the perspectives of an integrated practice that has integrated behavioral health care for over a decade and has demonstrated actual integration themes and factors. While this is a study of an exemplar case, the findings provide insights into those areas that are working and those that may not be working as expected and serves as an example for other practices looking to integrate behavioral health into primary care. This study offers opportunities and examples of approaches on what an integrated practice looks like and some insights to advance the level of integration that will aid in addressing mental health access to care.

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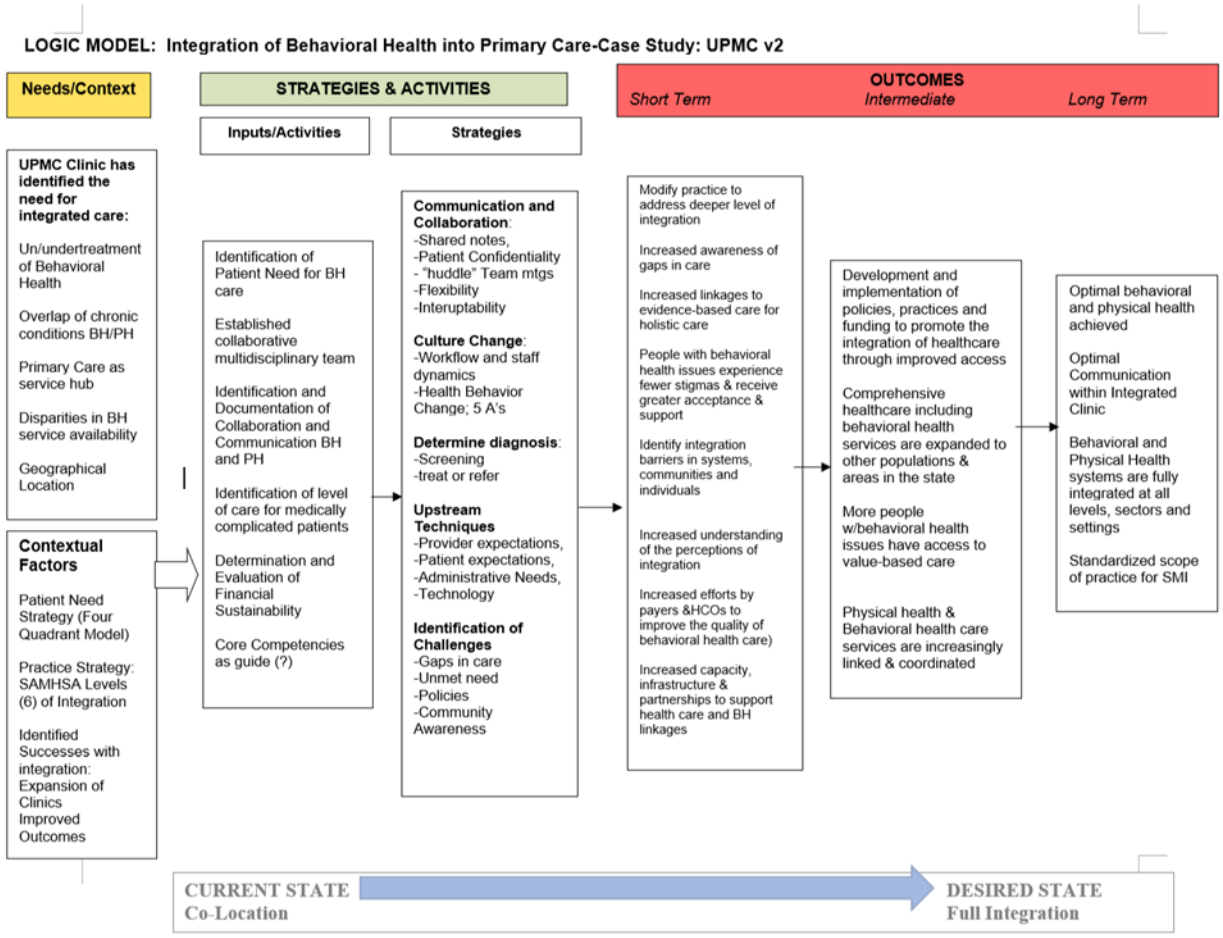
V. APPENDICES

Appendix 1: Original Logic Model



Appendix 2. Measurement Table

Q1. What are the stakeholder perceptions of the key characteristics of the current state of integration at University of Pittsburgh Medical Center/St. Margret's Family Health Clinics (UPMC)?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Current Level of Integration	While the overarching framework has three main categories — coordinated, co-located, and integrated care — there are two levels of degree within each category (SAMHSA). It is designed to help organizations implementing integration to evaluate their degree of integration across several levels and to determine what next steps they may want to take to enhance their integration initiatives.	Key Informant Interviews Document Review: -MHA presentation -Grant Proposal 2012	Co-located-Communication Coordinated-physical proximity Integrated-practice change	Construct table Document analysis Deductive thematic analysis (Excel or MAX QDA) Logic model
Cultural Competence/Adaptation	Refers to the ability to establish rapport quickly and to communicate effectively with consumers of healthcare, their family members and other providers. (SAMHSA)	Key Informant Interviews Secondary data: 2012 Survey Data	Examples include: identifying and addressing disparities in healthcare access and quality, adapting services to language preferences and cultural norms, and promoting diversity among the providers working in interprofessional teams.	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Interpersonal Communication	Refers to the ability to establish rapport quickly and to communicate effectively with consumers of healthcare, their family members and other providers. (SAMHSA)	Key Informant Interviews Secondary data: 2012 Survey Data	Examples Include: Active listening; conveying information in a jargon-free, non-judgmental manner; using terminology common to the setting in which care is delivered; adapting to the preferred mode of communication of the consumers and families served.	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Collaborations and Teamwork	Refers to the ability to function effectively as a	Key Informant Interviews	Examples Include: understanding and valuing the roles and responsibilities	Document analysis

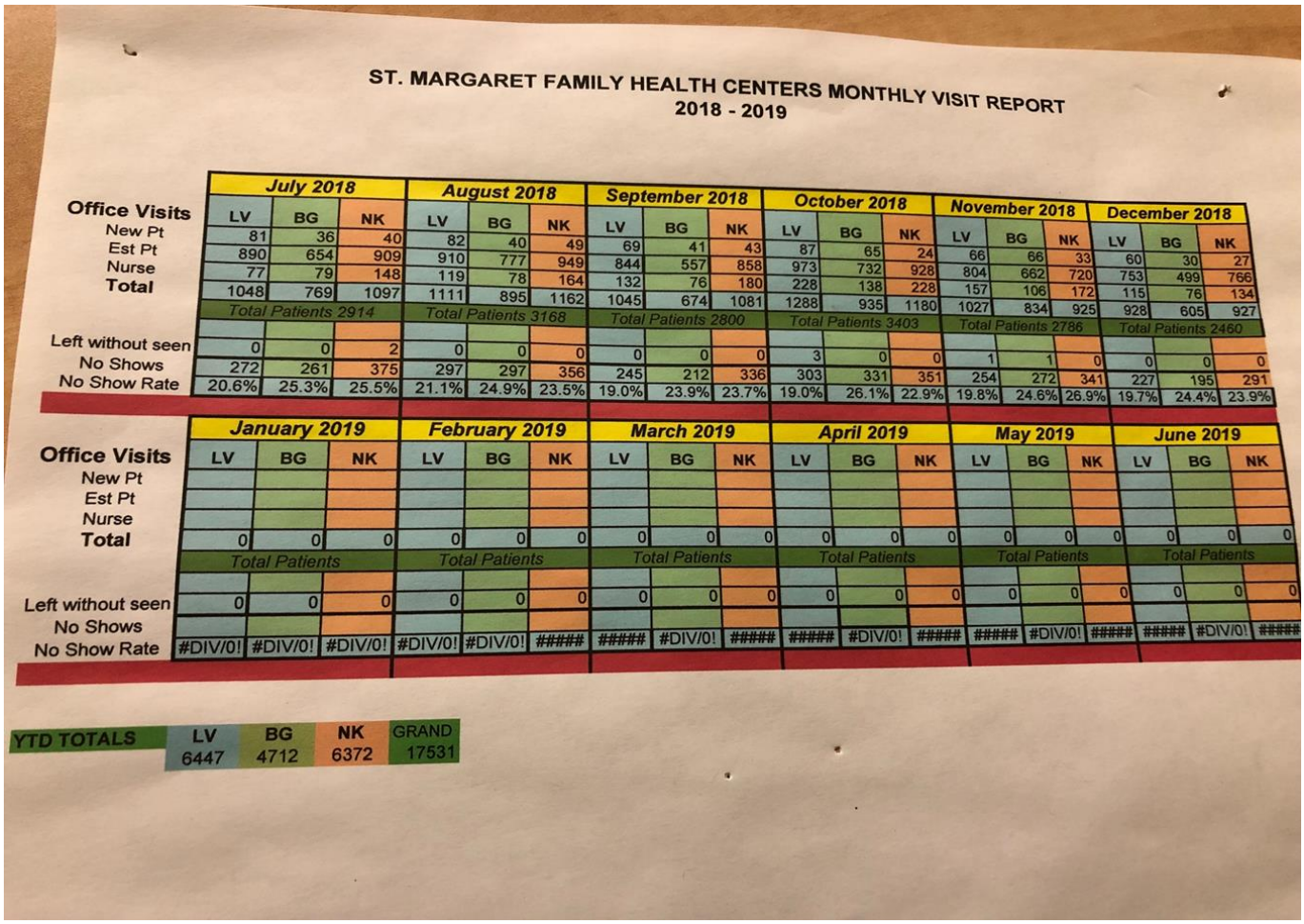
	member of an interprofessional team that includes behavioral health and primary care providers, consumers and family members. (SAMSHA)	Secondary Data: 2012 Survey Data	of other team members, expressing professional opinions and resolving differences of opinion quickly, providing and seeking consultation, and fostering shared decision-making.	Deductive thematic analysis (Excel or MAX QDA)
Care Planning/Coordination	Refers to the ability to create and implement integrated care plans, ensuring access to an array of linked services, and the exchange of information among consumers, family members, and providers (SAMHSA)	Key Informant Interviews Secondary data: 2012 Survey Data	Examples include: assisting in the development of care plans, whole health, and wellness recovery plans; matching the type and intensity of services to consumers' needs; providing patient navigation services; and implementing disease management programs.	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Screening and Assessment	Refers to the ability to conduct brief, evidence-based and developmentally appropriate screening and to conduct or arrange for more detailed assessments when indicated. (SAMHSA)	Key Informant Interviews Secondary data: 2012 Survey Data	Examples include screening and assessment for: risky, harmful or dependent use of substances; cognitive impairment; mental health problems; behaviors that compromise health; harm to self or others; and abuse, neglect, and domestic violence.	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Intervention	Refers to the ability to provide a range of brief, focused prevention, treatment and recovery services, as well as longer-term treatment and support for consumers with persistent illnesses.(SAMHSA)	Key Informant Interviews Secondary data: 2012 Survey Data	Examples include: motivational interventions, health promotion and wellness services, health education, crisis intervention, brief treatments for mental health and substance use problems, and medication assisted treatments.	Document analysis Deductive thematic analysis (Excel or MAX QDA)
1a. How is integration at UPMC perceived and defined by UPMC staff/providers?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Note: utilizing data above		Key informant interviews Secondary data: 2012 Survey data set, 2018 MHA Presentation	Note: utilizing data above	Document analysis Deductive thematic analysis (Excel or MAX QDA)

1b. What are the strengths and gaps with the current level of integration?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub- codes	Analysis
Note: Utilizing data above		Key Informant Interviews Secondary Data:2012 Survey data set	Utilizing data above	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Organizational: Funding	Refers to basic components of reimbursement and resource availability	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal	Grants, insurance payers, charitable giving,	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Organizational: Workforce	Refers to human resources/staffing	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Employees, Providers, training,	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Organizational: Technology	Refers to networks, systems to inform, communicate and capture information	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Electronic Health Records, integrated communication systems, email communication, telehealth, e-consult, telecommunications,	Document analysis Deductive thematic analysis (Excel or Atlas Ti)
Provider: Systems Practice	Refers to the high level of interaction that needs to take place within a health system	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Shared Vision, shared goals, value of communication and collaboration,	Document analysis Deductive thematic analysis (Excel or Atlas Ti)
Provider: Evaluation/Future Planning	Refers to detailed evidence on the measurement properties of integrated care and using measure future progress	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Improvements are often measured in terms of enhanced quality of the patient-care experience, better health and well-being of communities, and reduced per capita health care costs. Providers expectations	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Q2. How does the original vision of integration compare with the actual integration at UPMC?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Note: utilizing data above		Key Informant Interviews Secondary Data: Grant proposal, 2018 MHA	Note: utilizing data above	Deductive thematic analysis (Excel or MAX QDA)

		Presentation, 2014 All Together…presentation		
Q3. What are the perceived facilitators and barriers of the UPMC integrated care journey based on the factors?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Perception	Perspectives on how the UPMC facilitates the integration	Key Informant Interviews Secondary Data: 2012 Survey, 2014 All Together..presentation	Attitudes Beliefs Individual acceptance/rejection	Deductive thematic analysis (Excel or MAX QDA)
Facilitators	Identification and description of factors that enable integration	Key informant interviews Secondary data: -2018 MHA presentation, 2014 All Together presentation	Understanding the value of integration Fiscal resources Leadership support Training Technical assistance Perceived benefits Communication	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Barriers	Identification and description of factors that hinder integration	Key Informant Interviews groups Secondary data: -Strategies for Implementation Data Set	Fiscal constraints Lack of state and federal policy pathways for integration Limited resources for evaluation Lack of standardized billing codes for integration Lack of belief in integration	Document analysis Deductive thematic analysis (Excel or MAX QDA)
Q4. What is the process of documenting lessons learned?				
Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Lessons Learned	Refers to reflection on experience and deciding what worked and what did not, why and why not.	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Suggested categories include integration management, resources, technical, communication, leadership requirements, implementation and external areas. Include also process categories: initiating, planning, executing, monitoring and controlling and closing.	Deductive thematic analysis (Excel or MAX QDA) Document Analysis
Documentation	Record keeping of experiences to review and build on	Key Informant Interviews Secondary Data:2012 Survey data set, Grant proposal, MHA presentation	Examples include, surveys, survey data collection, Meetings, Discussions, Reports, Strategic Plans	Deductive thematic analysis (Excel or MAX QDA)
Q5. What are the stakeholder's perceptions for what actions need to be taken to move to a deeper level of integration? innovation?				

Constructs	Descriptions & Factors	Data Collection Approach	Examples/ Possible Sub-codes	Analysis
Perception	Perspectives on how the UPMC facilitates the integration	Key Informant Interviews Secondary Data: 2012 Survey, 2014 All Together..presentation	Attitudes Beliefs Individual acceptance/rejection	Deductive thematic analysis (Excel or MAX QDA)
Transformation-Levels of Integration	While the overarching framework has three main categories — coordinated, co-located, and integrated care — there are two levels of degree within each category (SAMHSA). It is designed to help organizations implementing integration to evaluate their degree of integration across several levels and to determine what next steps they may want to take to enhance their integration initiatives.	Key Informant Interviews Secondary Data: 2018MHA presentation, 2014 All Together presentation	Coordinated-physical proximity Integrated-practice change	Deductive thematic analysis (MAX QDA)

Appendix 3. UPMC/St. Margaret Family Health Center Monthly Caseload Through December 2018



ST. MARGARET FAMILY HEALTH CENTERS MONTHLY VISIT REPORT
2018 - 2019

Office Visits	July 2018			August 2018			September 2018			October 2018			November 2018			December 2018		
	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK
New Pt	81	36	40	82	40	49	69	41	43	87	65	24	66	66	33	60	30	27
Est Pt	890	654	909	910	777	949	844	557	858	973	732	928	804	662	720	753	499	766
Nurse	77	79	148	119	78	164	132	76	180	228	138	228	157	106	172	115	76	134
Total	1048	769	1097	1111	895	1162	1045	674	1081	1288	935	1180	1027	834	925	928	605	927
	Total Patients 2914			Total Patients 3168			Total Patients 2800			Total Patients 3403			Total Patients 2786			Total Patients 2460		
Left without seen																		
No Shows	0	0	2	0	0	0	0	0	0	3	0	0	1	1	0	0	0	0
No Show Rate	272	261	375	297	297	356	245	212	336	303	331	351	254	272	341	227	195	291
	20.6%	25.3%	25.5%	21.1%	24.9%	23.5%	19.0%	23.9%	23.7%	19.0%	26.1%	22.9%	19.8%	24.6%	26.9%	19.7%	24.4%	23.9%

Office Visits	January 2019			February 2019			March 2019			April 2019			May 2019			June 2019		
	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK	LV	BG	NK
New Pt																		
Est Pt																		
Nurse																		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Patients			Total Patients			Total Patients			Total Patients			Total Patients			Total Patients		
Left without seen																		
No Shows	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No Show Rate																		
	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#####	#####	#DIV/0!	#####	#####	#DIV/0!	#####	#####	#DIV/0!	#####	#####	#DIV/0!	#####

YTD TOTALS	LV	BG	NK	GRAND
	6447	4712	6372	17531

Appendix 4. PHQ-2- Screening Tool

The Patient Health Questionnaire-2 (PHQ-2) - Overview

The PHQ-2 inquires about the frequency of depressed mood and anhedonia over the past two weeks. The PHQ-2 includes the first two items of the PHQ-9.

- The purpose of the PHQ-2 is not to establish final a diagnosis or to monitor depression severity, but rather to screen for depression in a "first step" approach.
- Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder.

Clinical Utility

Reducing depression evaluation to two screening questions enhances routine inquiry about the most prevalent and treatable mental disorder in primary care.

Scoring

A PHQ-2 score ranges from 0-6. The authors[1] identified a PHQ-2 cutoff score of 3 as the optimal cut point for screening purposes and stated that a cut point of 2 would enhance sensitivity, whereas a cut point of 4 would improve specificity.

Psychometric Properties[1]

Major Depressive Disorder (7% prevalence)				Any Depressive Disorder (18% prevalence)			
PHQ-2 Score	Sensitivity	Specificity	Positive Predictive Value (PPV*)	PHQ-2 Score	Sensitivity	Specificity	Positive Predictive Value (PPV*)
1	97.6	59.2	15.4	1	90.6	65.4	36.9
2	92.7	73.7	21.1	2	82.1	80.4	48.3
3	**82.9**	**90.0**	**38.4**	**3**	**62.3**	**95.4**	**75.0**
4	73.2	93.3	45.5	4	50.9	97.9	81.2
5	53.7	96.8	56.4	5	31.1	98.7	84.6
6	26.8	99.4	78.6	6	12.3	99.8	92.9

** Because the PPV varies with the prevalence of depression, the PPV will be higher in settings with a higher prevalence of depression and lower in settings with a lower prevalence.*

1. Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener. Medical Care 2003, (41) 1284-1294.

The Patient Health Questionnaire-2 (PHQ-2)

Patient Name _____ Date of Visit _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?	Not At all	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3

Appendix 5. PHQ-9-Screening Tool Stage 2

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME:_____ DATE:_____

Over the last *2 weeks*, how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
		add columns	+	+

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card). TOTAL:

10. If you checked off *any problems*, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all _____
- Somewhat difficult _____
- Very difficult _____
- Extremely difficult _____

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PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder

- if there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.
Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up ✓s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying **PHQ-9 Scoring Box** to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

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Appendix 6. Focus Group Guide

Behavioral Health Integration Into Primary Care at UPMC-St. Margaret's Family Health Clinics: A Case Study

FOCUS GROUP GUIDE

DATE

INTRODUCTION

Hello, my name is Cynthia Bigley and I am a doctoral student with the University of Illinois at Chicago. Thank you again for taking your time today to share your experiences with the integrating behavioral health into primary care at UPMC-St. Margaret's Family Health Clinics. This focus group is a part of a larger case study process to learn about the process of integration within UPMC, specifically how this practice has evolved over time and to assess what is most important to continued evolution, and the alignment between its activities and practice needs. You are here because you have longer term experience with the integrated practices here at UPMC.

This research study is being conducted as part of my dissertation for my DrPH in the Public Health Leadership program at the University of Illinois at Chicago.

The purpose of this focus group is to identify alignment and/or gaps between provider/staff perceptions from UPMC St. Margaret's Primary Health Clinics regarding integrated behavioral health into primary care and the logic model developed from the literature and document reviews.

The focus group will take between 30 and 45 minutes; and will be audio recorded in order to accurately capture your responses.

Your rights as a participant: : *Participation is voluntary, and subjects may decline without impacting their relationship with either UIC or their position at UPMC. You may request that the recording be paused at any time. You may choose how much or how little you want to speak during the group. Your individual answers will not be shared as part of reporting study findings. Thus, all responses will be aggregated to protect participants' confidentiality. Audio recordings and subsequent typed transcripts will be kept on a password protected computer and BOX account.*

Benefits and risks of participation: *Your participation in this study, will contribute to the researcher's understanding of how the integrated care is facilitated, activities that are performed pertaining to integrated care, and associated outcomes. What is learned will help inform how to improve the research study and interview approach. You will not receive payment or other forms of compensation as part of this research. While it is likely that participants in the focus group may know or know of each other, all participants will be asked to respect the privacy and confidentiality of the group and not repeat to others who said what during the discussion*

What will happen with the information shared today: *The information shared during the focus group today may be shared with UPMC as part of the findings of the research; including audio recordings—however, —we will not release any information that identifies you or your organization without your prior consent, except as required by law.*

- *Do I have your permission to take notes during today's discussion?* Circle one: Yes or No

- *Do I have your permission to record our discussion?* Circle one: Yes or No

Great. Thank you. Do you have any questions before we begin?

QUESTIONS

1. In starting this process, I would like to learn a little about each of you. Can you please tell me your role, and how long you have worked here?

(Needs/Context)

Now, I would like to talk about your experiences with integrated care…

2. Tell me about your experience with integrated care
3. What do you feel are some of the unmet needs that are being addressed through integrating care?
4. What do you feel is most important when thinking about integrated behavioral healthcare?
   Probing question: Would you explain further?

(Activities/Inputs)

We are going to transition the discussion around activities such as the huddle team meetings.

5. How did huddle meetings begin?
   Probing question: Who's idea was it to create huddle meetings?
   Probing question: Who decided on who should be included?

6. Describe what happens during the team huddle meetings
   Probing question: How often do you meet? Do you meet outside of the huddle meetings?
   Probing question: Who leads the discussions?
   Probing question: How do you encourage participation?

7. Tell me about how you work together?

8. What are the most important considerations for collaboration and communication in integrated care?

(Strategies)

I would like to transition the discussion to learn more about some strategies that take place in this integrated setting.

9. How do you identify a patient who may need behavioral health care?
   Probing question: How is this addressed?

10. Please share what occurs when a you are faced with a medically complicated patient?
    Probing question: How is this addressed? What measures do you use?

11. Tell me about how you determine the diagnosis to treat or refer. (and the process)

Now let's focus the discussion on the workforce and the workplace for integrated care.

12. What are the most important qualities and/or competencies of the people who work in this integrated practice?

13. How are provider and practice needs addressed?
    Probing question: such as administrative needs, technology needs, training needs

14. Tell me about some workforce or workplace challenges that have been identified?

(Outcomes)

Now let's discuss what the future looks like from an integrated practice perspective

15. How do you determine what is important for continued forward progress within integrated care?
    Probing question: How are these ideas discussed?
    Probing question: Who are the ideas discussed with?

(Participant Confirmation w/ Operational Elements of the Logic Model)

16. What do you consider to be important outcomes from integrated care?
    Probing question: For the short term?
    Probing question: Intermediate
    Probing question: Long term?

Closing: Thank you.

Appendix 7. Interview Guide

Behavioral Health Integration Into Primary Care at UPMC-St. Margaret's Family Health Clinics: A Case Study

KEY INFORMANT INTERVIEW GUIDE

INTERVIEWEE **DATE**

INTRODUCTION

Good morning/afternoon/evening. Thank you for participating in this discussion of the ways this practice has integrated care. My name is Cynthia Bigley and I will facilitate our discussion today. Let me begin with a bit of background about the goals of today's interview.

I am a doctoral student from the University of Illinois at Chicago in a DrPH leadership program. This practice has been selected as an exemplar case of integrated care based on several criteria including the longevity of integrated care and an adaptive approach to care. This research will be an exploratory case study to understand the factors, characteristics, facilitators and barriers of integrating behavioral health into your primary care practice.

This interview will last about 60 minutes. Your participation is voluntary, and you do not have to answer any question that you do not feel comfortable answering. There are no right or wrong answers. If you do not want to be identified in the data from this interview, in parts or in its entirety, you can let me know now or at any time while we are talking. If you do not request confidentiality, you may be identified by your role (e.g., nurse manager, medical director, front office staff, leadership) in the case narrative, findings, or attributed quotes. You can change your mind about confidentiality at any time.

I would like to record our conversation today simply to ensure the accuracy of the information. The recording and transcripts will not be shared with UPMC and will be deleted at the end of the study. We will keep both the recording files and transcripts in a secure password protected BOX account. If you request confidentiality, the recording and transcripts will be de-identified.

Your rights as a participant: *You may request that the recording be paused at any time. Your individual answers will not be shared as part of reporting study findings. Thus, all responses will be aggregated to protect participants' confidentiality. Audio recordings and subsequent typed transcripts will be kept on a password protected computer and BOX account.*

Benefits and risks of participation: *Your participation in this study, will contribute to the researcher's understanding of perceptions of an exemplar case of integrated care including barriers, facilitators and lessons learned as it pertains to integrating behavioral health into primary care. What is learned will be provided as part of recommendations to UPMC/St. Margaret's continued efforts in integrated care. You will not receive payment or other form of compensation as part of this research.*

What will happen with the information shared today: *The information shared during the interview today will be kept confidential—we will not release any information that identifies you or your organization without your prior consent, except as required by law.*

- *Do we have your permission to take notes during today's interview?* Circle one: Yes or No
- *Do we have your permission to record our discussion?* Circle one: Yes or No

- *Do you agree to be identified by role?* Circle one: Yes or No
- *Do you agree to proceed with this interview?* Circle one: Yes or No

Great. Thank you. Do you have any questions before we begin?

QUESTIONS

Participant information

17. What is your role? What are your key responsibilities?
18. How long have you been in this role?

Current level of Integration (Q1.What are the stakeholder's perceptions of the current state of integration characteristics of University of Pittsburgh Medical Center/St. Margret's Family Health Clinics (UPMC)? Q1a. How is integration at UPMC perceived and defined by UPMC staff? Q1b. How does integration in practice compare to the documented definitions?)

19. In your own words, what does the term "integrated care" mean to you?
    Probe: Anything else?

20. How would you describe the characteristics of integrated care at UPMC/St. Margaret's?
21. What are some things you feel this practice does very well as it pertains to integrated care?

Strengths and Gaps (Q1c. What are the strengths and gaps with the current level of integration?)

22. Tell me about what you feel are the strengths of integrated care at UPMC/St. Margaret's.
23. Tell me about what you feel are the gaps of integrated care at UPMC/St. Margaret's?
24. What have been the biggest effects, or impact, of integrated care in this practice?

Actual Integration Experience (Q2. How does the original vision of integration compare with actual integration at UPMC?)

25. Describe what you understand to be the vision of integrated care at UPMC/St. Margaret's.
26. Describe how integrated care in your practice has changed over time.
27. What could help your organization continue or expand its efforts around support of integrated care delivery?

Barriers and Facilitators (Q3. What are the perceived facilitators and barriers of the UPMC integrated care journey?)

28. What are the major challenges (if any) that impact your organization's ability to promote the integration of primary and mental health care?
29. What do you feel helps facilitate integrated care at UPMC/St. Margaret's?
30. What do you feel are barriers to integrated care at UPMC/St. Margaret's?
31. Tell me about the process for facilitating routine (non-emergent) access to integrated primary health and behavioral health assessment.

Lessons Learned (**Q4. What is the process of documenting lessons learned? Q4a. What were lessons learned in the past 5 years?)**

32. How do you asses what is working and what is not working as it pertains to integrated care?
33. Thinking back over the last five years, describe what are some key learnings and how those learnings were addressed.
34. What would you change?

Future Progress (**Q5. What are the stakeholder perceptions for what actions need to be taken to move to a deeper level of integration?)**

35. In your opinion, what types of changes are needed to aid in moving to a deeper level of integrated care?
36. What do you feel are key factors to long term sustainability integrated care?
37. What do you foresee happening to move to a deeper level of integration?
38. Do you have anything else to add that we haven't touched on?

Closing

That was my last question. Do you have any questions for me?

Thank you for your time and valuable insights about your practice. You are helping us paint a picture of evaluation use here, and hopefully help others model or adapt this program's approach in their own to increase use of their evaluation data. You can anticipate the findings from this evaluation to be shared on CDC's Evaluation Day which will take place in September and I'll circle back to your program [POC] with the final materials. If you have any further questions, please contact me anytime.

Appendix 8. Codebook: Integrated Behavioral Health into Primary Care

Code System

- 1 Vision
  - 1.1 Vision vs Reality
- 2 key learnings/shifts/pivots
- 3 Characteristics
  - 3.1 Culture
  - 3.2 patient focused
  - 3.3 Integration definition/characteristics
- 4 Barriers
  - 4.1 History
  - 4.2 Reimbursement/Funding
- 5 Facilitators
  - 5.1 Residency Program/Training
  - 5.2 Champions
  - 5.3 Team Meetings
    - 5.3.1 Integrated Behavioral Health Team Meeting
    - 5.3.2 Huddle Team
    - 5.3.3 MDT
- 6 Strengths
  - 6.1 MAT/Substance Use Treatment
  - 6.2 Collaboration
    - 6.2.1 turnover
    - 6.2.2 Bridge/Linkages
- 7 Gaps
  - 7.1 Measuring Success/Outcomes
  - 7.2 Unmet Need
    - 7.2.1 social services
    - 7.2.2 Therapy/Other: Family, Marriage, Pediatric, Trauma
    - 7.2.3 Severe and Persistent Mental Illness
  - 7.3 potential gaps
- 8 Future Progress
  - 8.1 Sustainability

1 Vision

Pertaining to the vision of integrated care-
Practice goals and objectives for integrated care

1.1 Vision\Vision vs Reality

Descriptions of how vision of integrated care and reality of integration compare.

2 key learnings/shifts/pivots

Key learnings that occurred over time
Shifts in thinking based on original practice of care
Pivots that occurred to achieve integrated care

3 Characteristics

What are the characteristics of integrated care?

3.1 Characteristics\Culture

Descriptions of the culture at this integrated care practice

3.2 Characteristics\patient focused

A key characteristic of integrated care is the "patient focus"
Descriptions of how this practice is patient focused

3.3 Characteristics\Integration definition/characteristics

Specific perceptions of the definition of integrated care
Descriptions of integrated care characteristics and definitions

4 Barriers

Descriptions of themes identified that create a barrier to integrated care

4.1 Barriers\History

Descriptions of how history of this practice or the practice of family medicine or the practices of behavioral health has impacted integrated care

4.2 Barriers\Reimbursement/Funding

Reimbursement challenges identified
Funding challenges described and identified

5 Facilitators

Identified themes that help facilitate integrated care

5.1 Facilitators\Residency Program/Training

A unique facilitator describing how the residency program and training may impact integrated care

5.2 Facilitators\Champions

Champions for integrated care and how this impacts integrated care

5.3 Facilitators\Team Meetings

Descriptions of how team meetings impact integrated care

5.3.1 Facilitators\Team Meetings\Integrated Behavioral Health Team Meeting

Specific team meeting that is focused only on the integrated behavioral health team

5.3.2 Facilitators\Team Meetings\Huddle Team

Another form of a team meeting that occurs regularly that is focused on the patient cases for the day regardless if the need for integrated or not

5.3.3 Facilitators\Team Meetings\MDT

MDT- multidisciplinary team - type of meeting that occurs in this integrated practice that includes all disciplines and occurs weekly - day varies by site

6 Strengths

Perceptions of what this integrated practice views as strengths and/or what they do well.

6.1 Strengths\MAT/Substance Use Treatment

A new adaptation to their integrated services is the addition of Medically Assisted Treatment for substance use disorder-

6.2 Strengths\Collaboration

Perceptions on collaboration descriptions as well as why it is important to integrated care

6.2.1 Strengths\Collaboration\turnover

Low turnover as a strength of integrated care

6.2.2 Strengths\Collaboration\Bridge/Linkages

Bridges and linkages
Connections that impact integrated care

7 Gaps

Perceptions regarding identified Gaps of integrated care
Things that are missing from this practices

7.1 Gaps\Measuring Success/Outcomes

Proving that integrated care works
Showing the continuum of care and the impact it is making on health and wellness
Specific metrics to demonstrate the strengths and gaps of integrated care

7.2 Gaps\Unmet Need

Identified specifics to continued unmet needs

7.2.1 Gaps\Unmet Need\social services

Services such as housing, insurance, transportation, domestic violence, employment, food, family issues other social determinants of health
Population health

7.2.2 Gaps\Unmet Need\Therapy/Other: Family, Marriage, Pediatric, Trauma

Identified unmet needs in the areas of other therapies
areas that this integrated practice does not specifically cover or have services for such as pediatric/child/adolescent therapy, marriage and family therapy, trauma specific care (including ptsd, emotional trauma, physical trauma, ongoing trauma)
Still relies on referral

7.2.3 Gaps\Unmet Need\Severe and Persistent Mental Illness

Unmet need specifically looking at schizophrenia, bipolar and those severe and persistent mental illness that this integrated care does not have that higher level of care
Still relies on referral

7.3 Gaps\potential gaps

Other descriptions of areas of unmet need that may be a potential gap that can or is impacting integrated care

8 Future Progress

Perceptions of what actions need to be taken to move to a deeper level of integration

8.1 Future Progress\Sustainability

Descriptions of how integrated care can be sustained
What is taking place or what needs to take place for continued future progress and/or sustainability

Appendix 9. A-Priori Codes

	Themes			
	Integrated Care	**Outcomes**	**Process/Techniques**	**Sustainability**
	(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
Document	Poster Presentation	Poster Presentation	Poster Presnetation	Poster Preseentation
		Integrated BH-Han 9/13		Integrated BH-Han 9/13
		Lifestyle Questionnaire	Lifestyle Questionnaire	Lifestyle Questionnaire
	MHA-SWPA Presentation	MHA-SWPA Presentation	MHA-SWPA Presentation	MHA-SWPA Presentation
		Raw Data Provider Survey	Raw Data Provider Survey	
	Funding Proposal	Funding Proposal	Funding Proposal	Funding Proposal

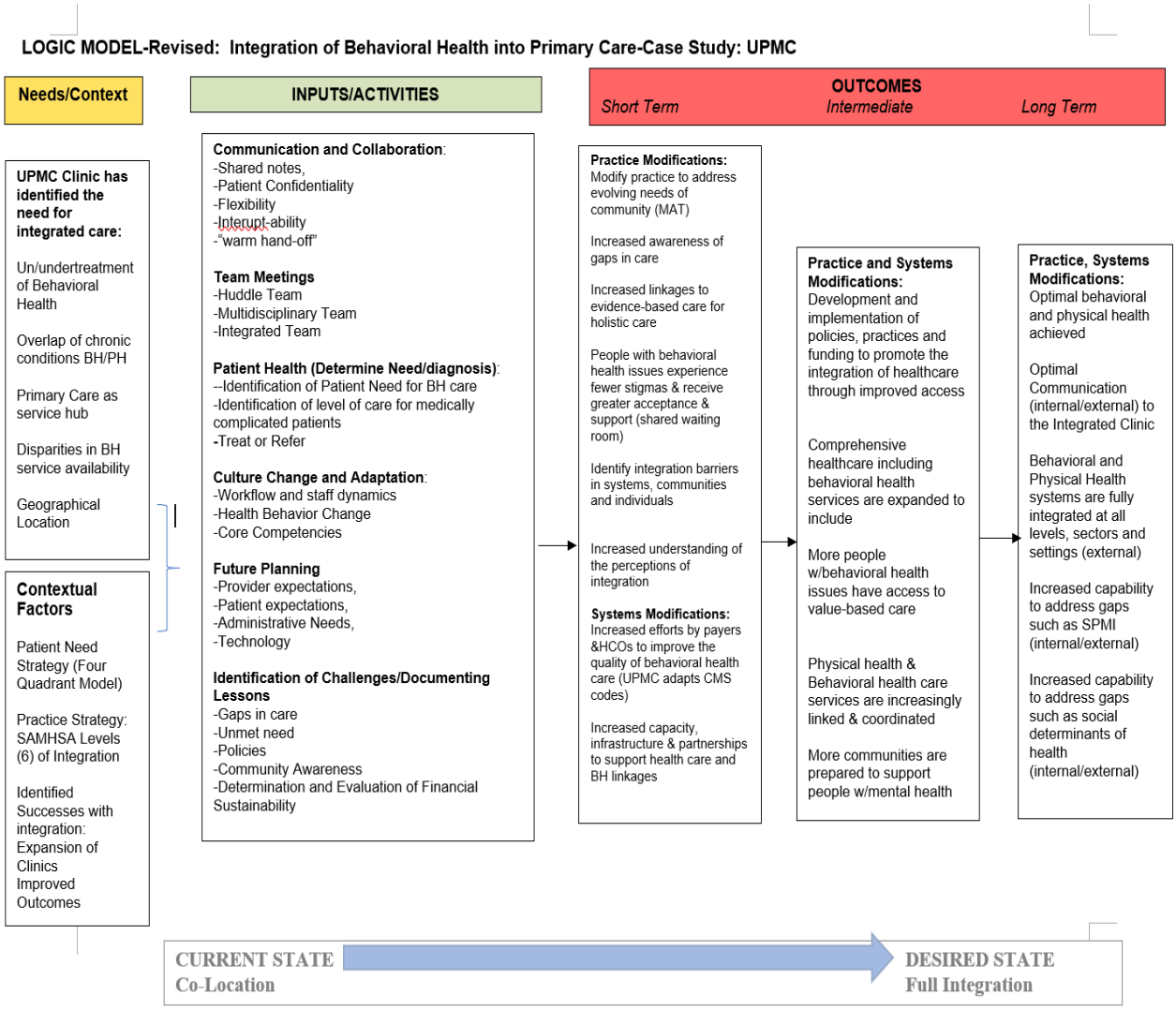
Appendix 10. Content Analysis Themes (Manual Codes w/Examples)

1-POSTER PRESENTATION					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples	Identify and treat BH issues using workflow and culture change	Deomonstrated improved patient outcomes for depression and fucnional status	Identify and treat BH issues using owrkflow and culture change	Sustain financially integrated model through regional payers and enhanced reimbursment
		Care consultation meetings established for hi-risk patients	Sustain financially integrated model through regional payers and enhanced reimbursment by year 2	Integrated EHR established psychotherapy notes stored separately	Attained level 3 medical home status for potential additional revenue
		Improved workflow and provider communications focused on providers prepared to manage bh concerns and	Attained level 3 medical home status for potential additional revenue	Care consultation meetings established for hi-risk patients	Negotiated reimbursment options with regional BH payers
		Incorporated integration techniques into residency curriculum	Negotiated reimbursment options with regional BH payers	Sustainability goals on target also including delays for billing while waiting on credentialing	Sustainability goals on target (using billed/captured/adjusted and total costs)
		Secure funding for MSW to assume case management and move to LCSW for billing by year 3	Depression score decreased	Improved workflow and provider communications focused on: adequate feedback from BH team, effective collaboration, Providers are prepared to manage bh concerns	Secure funding for MSW to assume case management and move to LCSW for billing by year 3
			Sustainability goals on target (using billed/captured/adjusted and total costs)	Incorporate integration techniques into residency curriculum	Track medical outcomes for patients with comorbid chronic disease and BH issues
			Improved workflow and provider communications focused on patients received necessary integrated care	Secure funding for MSW to assume case management and move to LCSW for billing by year 3	
			Track medical outcomes for patients with comorbid chronic disease and BH issues		
2-HAN 9/2013 RESIDENCY PRESENTATION					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples		Measured: reduction in ER visists overall, pscyh, reduction in PHQ9scores increased service utilization		Cost perspective is assumed for important outcome measurement to help make the case for integrated care
3-BRIEF SCREENING-LIFESTYLE QUESTIONNAIRE					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples	Obtain demographic and general patient information	First page observation: quesitons on mood, anxiety, tobacco alcohol and drugs	Obtain demographic and general patient information	
		Flagged for depression issues for further screening	Behavioral Health issues priority	Flagged for depression issues for further screening	
				Behavioral health issues priority	

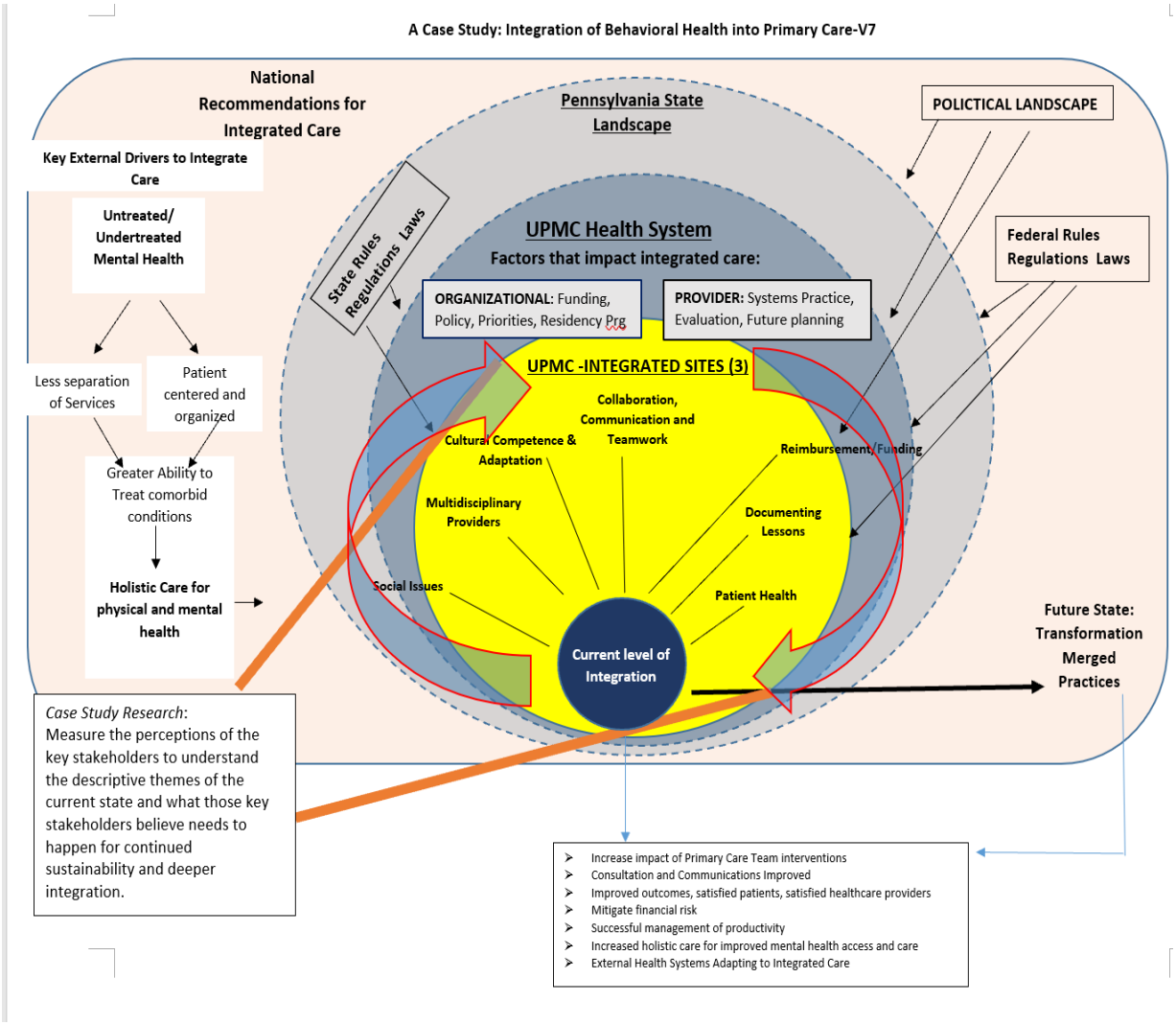
4-MHA-SWPA SLIDES					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples	Disproportionate utilzation	Patient access to care	Fragmentation/Segmentation	Cost of healthcare
		Fragmentation/Segmentation	Outcomes related to ACEs (focus is overalp with comorbid disease, can be inferred early intervention need)	Outcomes related to ACEs (focus is overalp with comorbid disease, can be inferred early intervention need)	Disproportionate utilization
		Outcomes related to ACEs (focus is overalp with comorbid disease, can be inferred early intervention need)	Opioid Epidemic/Addition overlap	Opioid Epidemic/Addition overlap	Fragmentation/Segmentation
		Principles of Integrated Care: - medical is primary, emotional/bh affect phsycial health provide open access for patient care, Collaborative efforts, regular communicatoin, balance of social work,	Predictors for hospitalization	Principles of Integrated Care: - medical is primary, emotional/bh affect phsycial health provide open access for patient care, Collaborative efforts, regular communicatoin, balance of social work,	Treatment in integrated primary care as assessed by UPMC: 85% of bh patients can be treated in the primary care setting, 10% need a referral to a community treatmetn center, 5% need specialty bh care
		Practical component of integrated care: define available interventions (CBT, MI, SBIRT), define diagnosis that are able to be treated and those that need referral	Suicide issues	Practical components of integrated model: universal screener, warm hand off, collaborative documentation, multidisciplinary team meetings	Challenges to integration: IBH staffing, provider epectations/patient expectations, administration and sustainability
		Shifts from traditional mental health services: brief interventions, flexibility, working in same space, interruptions, confidentialty and patient interactions/collaboration	Practical component of integrated care: define available interventions (CBT, MI, SBIRT), define diagnosis that are able to be treated and those that need referral	Practical component of integrated care: define available interventions (CBT, MI, SBIRT), define diagnosis that are able to be treated and those that need referral	How can preventative care be integrated
		Treatment in integrated primary care as assessed by UPMC: 85% of bh patients can be treated in the primary care setting, 10% need a referral to a community treatmetn center, 5% need specialty bh care	Health Behavior Change-designed to address bh problems that have not reached the level of clinical psych	Health Behavior Change-designed to address bh problems that have not reached the level of clinical psych	Lessons Learned: need family med champion, team work, buy in from bh staff, provides and patients identify safety concerns aIOC early, understand work in progress communication
		Use SAMHSA model to Integrate	Shifts from traditional mental health services: brief interventions, flexibility, working in same space, interruptions, confidentialty and patient interactions/collaboration	Use 5As- Assess, Advise, Agree, Assist, Arrange	
		How can preventative care be integrated	Social determinants of physical and mental disorders	Shifts from traditional mental health services: brief interventions, flexibility, working in same space, interruptions, confidentialty and patient interactions/collaboration	
		Lessons Learned: need family med champion, team work, buy in from bh staff, provides and patients identify safety concerns aIOC early, understand work in progress communication		Treatment in integrated primary care as assessed by UPMC: 85% of bh patients can be treated in the primary care setting, 10% need a referral to a community treatmetn center, 5% need specialty bh care	
				Use the four quadrant model (strategy to determine patient need and practice readiness)	
				Upstream techniques	
				How can preventative care be integrated	

5-PROVIDER SURVEY RAW DATA					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples	Suggestions: awareness of the integrated program, more staf, better communicatoin improvement of transparency with EHR and sharing with outside the scope of practice more details on noes patient show rates need to improved	Patients receiving integrated health care at family health center	Communication collaboration feedback between providers	Job satisfaction
			Patients receiving referral assistance to outside resources when appropriate	Capabilityto manage BH issues at FMC	Suggestions: awareness of the integrated program, more staf, better communicatoin improvement of transparency with EHR and sharing with outside the scope of practice more details on noes patient show rates need to improved
			Suggestions: awareness of the integrated program, more staf, better communicatoin improvement of transparency with EHR and sharing with outside the scope of practice more details on noes patient show rates need to improved	Suggestions: awareness of the integrated program, more staf, better communicatoin improvement of transparency with EHR and sharing with outside the scope of practice more details on noes patient show rates need to improved	One suggesstion primary care and bh should not be integrated, bh is a specialty
6-FUNDING PROPOSAL					
	Themes	Integrated Care	Outcomes	Process/Technique	Sustainability
		(Defined, Described)	**(Achieved, Perceived, Desired/Goals)**	**(Communication, Collaboration, Steps, Workflow, Guides)**	**(Workforce, Reimursement, Funding, Challenges, Next Steps)**
	Examples	Background	Level 3 medical home achievment status	Program Design: collaborated cre, depression care manage, designated psych, outcomes measurement, stepped care, pharmD availability, integrated model program grant usage,	Background
		Need, epi, overlap, bh prevalence			Organizational info
		Need within each service area	Program goals: early id and treatment of mental illnes, bh support and service delivery using IMPACT as an integrated model for depression, address sub use issues, benefit for ped patients		Level 3 medical home achievment status
		Program Design: collaborated cre, depression care manage, designated psych, outcomes measurement, stepped care, pharmD availability, integrated model program grant usage,			Program goals: early id and treatment of mental illnes, bh support and service delivery using IMPACT as an integrated model for depression, address sub use issues, benefit for ped patients
		Sustainability: seed money self sustaniable			Program Design: collaborated cre, depression care manage, designated psych, outcomes measurement, stepped care, pharmD availability, integrated model program grant usage,
					Sustainability: seed money self sustaniable

Appendix 11. Revised Logic Model



Appendix 12. Revised Conceptual Model



VITA

CYNTHIA L. BIGLEY

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EDUCATION

Doctor of Public Health, Leadership (DrPH) University of Illinois, Chicago 2015-2020
Dissertation:
Integrated Behavioral Health into Primary Care
Exemplar Case Study from the University of Pittsburgh Medical Center/St. Margaret's Family Health Clinic

Master in Public Health (MPH) East Stroudsburg University 2010-2012
Thesis:
Comparative Analysis of Latino Health Behavior Risk Assessment of Hunterdon County Latino Residents (2007 v. 2011)

Bachelor of Arts East Stroudsburg University 1987-1991
Psychology, Minor in Business Administration

PROFESSIONAL MEMBERSHIPS

Healthcare Businesswomen's Association (HBA)
National Alliance for the Mentally Ill (NAMI)
Mental Health America (MHA)
Society for Public Health Educators (SOPHE)
Juvenile Diabetes Research Foundation (JDRF) – Local Walk Committee Board Member
Eta Sigma Gamma – National Health Education Honorary

SPECIAL PROJECTS

Federal Government Affairs Rotation(Otsuka)

- Policy Advocacy Engagement
  - Mental Health – (NAMI, MHA, DBSA, ABHW, Alliance for Aging Rsch)
  - Rare Disease (PKD Foundation)
- Digital Medicine Priorities (Privacy and Confidentiality Policy-CFR 42 Part 2)
- Congress and Senate Engagement aligned with Otsuka Priorities
- Agency Management (Avalere, Aiken Gump)
- Cross-functional Collaboration (Lundbeck, Avanir)

WORK EXPERIENCE

Otsuka America Pharmaceuticals Inc., *Princeton, NJ* ***2011 – Present***

Associate Director, State Government Affairs and Advocacy

- Engage with legislators in Great Lakes Region to share Otsuka platforms in mental health, renal rare disease and other health solution areas
- Engage with Advocacy organizations in the Great Lakes Region to partner and grow the network in the mental health and renal rare disease to promote better health solutions

Reimbursement and Patient Access Manager, Assure Program

- Provide leadership in introducing and implementing the Assure Program to healthcare professionals and healthcare systems
- Responsible for building a network of providers and supporters to streamline patient care
- Identify, enroll and contract with pharmacies for network inclusion to help coordinate additional outlets for outpatient therapy
- Execute in depth reimbursement support and consultation with providers (buy and bill, assignment of benefits, prior authorizations, continuity of care)
- Facilitate discussions with matrix team to inform, educate, learn and maintain comprehensive communication amongst the team
- Contribute to the internal development of the role through continuous learning and improvement (policy, health systems, access, reimbursement, patient support)
- Led a self-initiated project workshop on Leadership Development at a national meeting
- Responsible for understanding and working within changing landscapes (managed markets, payer system, healthcare system, patient navigation)

Neuroscience Account Manager

- Appointed National Administrator on regional response to projects and tasks including healthcare reform, market access dynamics, vendor management, resource management
- Advise on program design for key company initiative involving patient access, patient care and market demands
- Strategically focus to develop programs for accounts
- Appointed Market Point person to liaise between Marketing and field
- Assisted in developing to help teammates get acclimated quickly to the company and the field
- Appointed Pennsylvania point person for the Northeast Regional Managed Markets Matrix Team
- Appointed Pennsylvania Team point person to liaise between home office and several districts to assist in market dynamic changes
- Streamlined communications between the field and Account Executives for managed markets.
- Participated in development and legal approval of regional triage form for managed market communications

East Stroudsburg University, *East Stroudsburg, PA* ***2013 – Present***

Faculty, Department of Health Studies

- Teach graduate and undergraduate course work in Ethics, Policy, Law, Planning and Evaluation
- Collaborated to develop new curriculum to include mental health awareness to the public health program as well as MPH program

The Institute for Public Health Research and Innovation (IPHRI), *East Stroudsburg, PA*
2013 – 2016

Research Assistant-P/T

- Return on Investment for diabetes interventions CDC funded for the PADOH
- Return on Investment analysis for community based mental health initiative supporting mental health advocacy in collaboration with Pocono Medical Center

Sunovion Pharmaceuticals, *Marlborough, MA* ***2010 – 2011***

Therapeutic Specialist

- Identified new opportunities for business while maintaining corporate integrity and compliance
- Focused attention strategically on greatest opportunities (private insurance) to gain business while balancing all areas for potential growth (FFS Medicaid)

Cumberland Pharmaceuticals, *Nashville, TN* ***2009 – 2010***

Hospital/Health Systems Specialist

- Worked with several Pennsylvania health systems (St. Lukes University, Lehigh Valley, Susquehanna Health, Blue Mountain, Hershey) to expand contacts to further support new areas of opportunity for key stakeholders
- Gained formulary approval to improve patient access to new injectable form of pain management

Johnson & Johnson / Janssen Pharmaceutica*, Titusville, NJ* ***1992 – 2009***

(Product Management, District Management, Account Management)

- Promoted continually during tenure based on exceeding standards on performance reviews and top sales rankings
- Trained new and tenured representatives on product information, computer and overall business acumen

- Managed key account systems in New England such as Harvard Pilgrim Healthcare and McClean Hospital as well as several local satellite managed care accounts (Cigna, US Healthcare)
- Assisted in setting up local large Psychiatry practice to be included in clinical trials for antipsychotic agent (autism/aggression in children)
- Launched successfully several products and indications in the fields of anti-infectives, gastroenterology, pain management and antipsychotics
- Analyzed budget reporting, media promotional meetings, crisis management planning in the franchise areas of pain management, anesthesia, oncology, antifungal franchises
- Managed database for direct to consumer (DTC) rollout campaign transitioning antifungal drug from prescription to over the counter availability

PROFESSIONAL PRESENTATIONS

Bigley, C. *Return on Investment Analysis: A tool for policy advocacy.* American Public Health Association, Annual Meeting November, 2013.

Bigley C. *Return on Investment Analysis: A tool for policy advocacy.* Society for Public Health Educators, Annual Meeting October, 2012.

Bigley, C. *Return on Investment Analysis: A tool for policy advocacy.* Pennsylvania Department of Health, September, 2012.

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