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Running head: COLLABORATIVE ROLE OF PSYCHOLOGISTS

The Collaborative Role of Psychologists in Rural Pediatric Primary Care Settings

by

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DISSERTATION

Submitted in partial fulfillment of the requirements for the degree
of Doctor of Psychology in the Department of Clinical Psychology
of Antioch University New England, 2012

Keene, New Hampshire



Department of Clinical Psychology

DISSERTATION COMMITTEE PAGE

The undersigned have examined the dissertation entitled:

**THE COLLABORATIVE ROLE OF PSYCHOLOGISTS
IN RURAL PRIMARY CARE SETTINGS**

presented on February 23, 2012

by

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Dedication

This dissertation is dedicated to my parents, who have been pillars of strength and encouragement throughout my life. Without their support, I would not have had the courage or resources to achieve my goals.

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Abstract

In this dissertation I discuss research conducted to gain a greater understanding of the unique collaborative needs and desires of medical professionals working with pediatric patients in rural communities. Specifically, I researched the following question: Do medical professionals working in rural areas desire more in-depth collaborative relationships with mental health professionals than they currently have? I acquired information on this subject by mailing surveys to primary care physicians, nurse practitioners, and family practice doctors to learn more about their opinions regarding collaboration with mental health professionals. I collected data over a one-month period, resulting in 11 completed surveys being returned. After collecting data on the physicians' needs, desires, and barriers to collaboration, I examined the descriptive statistics of the surveys. This study found that, in general, most physicians have not had enough mental health training to adequately screen clients for mental health issues or to know what services mental health professionals can provide their patients. It also indicated that there are many unique barriers that prevent physicians in rural areas from collaborating as much as they desire.

Chapter 1: Introduction

In the 2003 President's New Freedom Commission on Mental Health, it was reported that there is a large gap between the mental health needs of children and the services and supports available to meet those needs (Tolan & Dodge, 2005). Most families with children who have a mental disorder, even those with adequate financial resources, find it difficult to access appropriate and effective services (U.S. Public Health Service, 2000). The impact of the failure to provide effective care extends beyond children. It hinders the functioning of the child's caregivers and those who employ the caregivers (Tolan & Dodge, 2005). At any given time approximately 20% of children experience symptoms that constitute a DSM-IV disorder with approximately 7% exhibiting extreme functional impairment (Costello et al., 1996).

Statement of the Problem

While there is a substantial need for mental health services, it is not being met. Only about one third of children with a diagnosable psychological disorder are able to obtain mental health services (Burns et al., 1995). Services are even less available in communities with a higher prevalence of mental health problems, which are usually low-income and minority communities (Tolan & Dodge, 2005). Ringel and Sturm (2001) estimated that services meet the needs of 31% of nonminority children, but only 13% of minority children.

Mental health issues affect children and families in ways other than those related to a diagnosed disorder (Tolan & Dodge, 2005). It has been estimated that 25% of the 150 million child visits per year for primary health care (nonmental health and other medical specialties) have a behavioral or psychological problem associated with their presenting problem (National Ambulatory Medical Care Survey; Woodwell, 2000). Additionally, anywhere from 12-20% of medical visits are prompted by psychosocial problems in children and adolescents

(Briggs-Gowan, Horwitz, Schwab-Stone, Leventhal, & Leaf, 2000). Mental health issues and concerns are common reasons for families to seek primary health care services. Therefore, assessment of mental health issues is one of the most common activities of most primary care providers. In surveys of medical practices, primary care providers have reported that they felt they received inadequate training to assess and treat mental illness (Cawthorpe, 2005; Olson et al., 2001; Rushton, Clark, & Freed, 2000) and a majority reported particular discomfort treating patients with anxiety disorders or depression (Rushton et al., 2000; Williams, Klinepeter, Palmes, Pulley, & Foy, 2004). Physicians reported feeling more comfortable with externalized behavioral problems, such as those seen with attention deficit hyperactivity disorder (Rushton et al., 2000).

Rationale for the Study

Collaboration with mental health professionals is becoming an essential task for medical professionals. Our health care system is heading in the direction of a more inclusive and comprehensive style of care, housing mental and physical health facilities under one roof. This will inevitably lead to a higher rate of collaboration between mental health professionals and medical professionals.

Collaboration with mental health professionals is not just becoming a more routine activity in clinics; it has also been shown to help to improve the overall health and prognosis of physicians' patients. Fickel, Parker, Yano, and Kirchner (2007) report that collaborative care can improve the primary care of patients with depression by improving monitoring of patient response to treatment, supporting patient self-management, supporting patient and provider adherence to recommended care, and facilitating referral to mental health specialists when appropriate. Studies have also found that inadequate or incomplete collaboration between mental

health providers and medical professionals may adversely affect treatment continuity, patient access to care, timeliness of care, and patient outcomes (Yuen, Gerdes, & Waldfogel, 1999).

Collaboration between mental health professionals and primary care physicians is not a new endeavor, but in some parts of the country it has yet to be implemented, especially in rural settings. Having information regarding what other medical professionals have found helpful in collaborative relationships with mental health professionals, or what they are looking for from a future relationship, should act as a resource when cultivating a new collaborative relationship. Also, President Obama's recent health care reforms will have a drastic influence on the rate and type of collaboration conducted between mental health professionals and medical professionals. The nature of this country's healthcare is moving toward collaboration and consultation across healthcare disciplines. Assessing the knowledge and opinions of medical professionals regarding the Affordable Care Act will be important. The findings of this study will be helpful with the development of relationships between medical professionals and mental health professionals in rural settings.

I studied physicians' opinions on collaborative relationships as well as the barriers to collaboration in order to further examine these two variables in rural communities. I surveyed physicians through the mail and analyzed the descriptive statistics of the question outcomes. Better understanding of these variables may contribute to existing research on barriers to collaboration, physicians' desired aspects of collaboration, as well as unmet needs that may improve collaborative relationships between medical professionals and mental health professionals.

Implications of the Study

In researching and writing this dissertation, I explored both the wants as well as the

unique needs of medical practitioners working in rural areas of New Hampshire when collaborating with mental health professionals. Physicians' collaborative relationships with mental health professionals are a particularly important aspect of working in rural areas because many people come to medical professionals with mental health concerns. While the concept of medical professionals collaborating with mental health professionals is not a new concept, in many rural areas of the country these relationships are just beginning to form. This dissertation research is intended to contribute to existing research about forming a collaborative relationship between mental health professionals and medical professionals. This topic and the outcome of this research may be useful for medical professionals, mental health professionals, and parents of children who are suffering from a mental health disorder.

Larger agencies and institutions who fund and support the establishment of collaborative care relationships between physicians and mental health professionals may also be interested in this study or future studies examining these collaborative care models. Informational findings from this study span the interest fields of psychology, medicine, and rural integrative care to include a broad array of potential stakeholders. I hope that this small research study may lend awareness into the needs and limitations of successful collaborative relationships in rural areas.

Goals of the Study

The purpose of this study was to explore the needs and goals of medical professionals in a rural area of New England regarding collaborative relationships with psychologists in their work with children and adolescents. In this study, the term medical professional refers to pediatricians, family practice physicians, and nurse practitioners. These providers were chosen because they are exposed to the greatest number of child and adolescent patients. These practitioners also receive more specialized training in treating patients under the age of 18 than

do physicians focusing on adult care.

The medical professionals' use of standard diagnostic criteria, frequency of contact with mental health professionals, and reason for collaboration with a mental health professional were all studied. In addition, the study looked at the nature of the collaborative relationship (i.e., model) in which PCPs wished to engage with mental health professionals. This included how much follow-up contact they wanted with the mental health professional, whether they were looking for a consultative or a more collaborative relationship, and whether or not they felt comfortable assessing their patients for mental health issues (e.g., administering a psychological symptom checklist or behavioral inventory).

Research Questions

This study was conducted in order to research the following idea: *Medical professionals working in rural areas will desire more in-depth collaborative relationships with mental health professionals than they currently have.* In order to begin exploring the relationship between medical professionals and mental health professionals, preliminary research questions were also explored. I explored possible answers to the following additional research questions:

- Will physicians in rural areas already have some sort of collaboration with mental health professionals at their clinic?
- Have physicians had adequate training on the topic of mental health in order to feel comfortable recognizing mental health disorders?
- Will physicians prefer the collaborative team model, but feel as though the independent functions model would be more possible to implement?

These questions were clarified by data with regard to examining descriptive statistics of participants' responses to related survey questions.

These research questions also contain potential information regarding barriers to collaborative care in rural areas. Currently, much of the research on collaborative care between medical professionals and mental health professionals is done on pre-existing collaborative relationships (i.e., programs already developed in more populated areas of the country). Researching the collaborative wants, needs, and barriers in rural areas where the collaborative relationships are still forming has the potential to be scientifically interesting as results could help to form relationships more cost and time efficient for all parties involved.

Chapter 2: Literature Review

This study further investigated the specific needs of medical professionals in rural settings regarding their exposure to mental health issues and their need for collaboration with mental health clinicians. The following literature review addresses the issue of primary care providers (PCPs) assessing and treating psychosocial problems (e.g., behavioral, emotional, and educational problems) in pediatric patients. It begins by looking at how physicians' specific training can affect their ability to accurately identify psychological problems. The literature review then looks at the unique needs of medical professionals practicing in rural, low-income areas of New England. It also describes different models of collaboration possible between medical professionals and psychologists. It then explores the impact that current changes in managed care have made on collaborative care. Finally, it concludes with a discussion of the goals of this current study which was designed to examine collaborative relationships between medical professionals and mental health clinicians in rural areas, and to elucidate the aspects of the relationship that would be most beneficial to the medical professionals. I have chosen these topics for review in order to attain an understanding of the unique challenges and needs for collaboration of medical professionals practicing in rural areas as well as the collaborative models available to them.

PCPs Training and Identification of Psychosocial Problems

Primary care physicians (PCPs) are often put in the unique position of being asked to assess and treat mental health issues, an area where most PCPs have not received substantial training. One example of this is Dartmouth College, located in Hanover, NH, which offers graduate training in Medicine. The only mention of mental health in their training is an optional fourth-year elective, entitled Primary Pediatric Care Electives. This lack of exposure to mental

health training is disappointing, especially because approximately 60% of patients with diagnosable psychological disorders go to primary care physicians to receive care rather than to mental health professionals (Shedler, Beck, & Bensen, 2000). Unfortunately, PCPs often undertreat and underdiagnose mental disorders. Research shows that mental disorders are present in at least 20% of medical outpatients, and that 50-65% of these cases go undetected (Shedler et al., 2000). The following studies looked at whether it was necessary for PCPs to have specialized training in behavioral pediatrics or a related field to correctly identify and treat mental health issues.

Studies have shown pediatricians who receive specialized training dealing with children and adolescents are better able to accurately identify their patients' psychosocial problems (Leaf et al., 2004). Leaf et al. found that pediatricians who received optional specialized training in psychosocial issues were more successful in the identification and management of children's psychosocial problems when compared to pediatricians with no advanced training. Specifically, pediatricians who had completed a fellowship in developmental or behavioral pediatrics, adolescent medicine, and had participated in intensive collaborative office rounds with psychologists were found to be more likely to correctly identify psychosocial problems. These pediatricians were also found to utilize multiple treatment approaches compared to pediatricians without the specialized training. However, this specialized training did not improve the pediatricians' ability to successfully treat the psychosocial problems. This study suggests that fellowship training in a mental health related field, such as behavioral pediatrics, is associated with improved identification of psychosocial problems. However, this advanced training does not improve the PCP's ability to manage and treat the patient's mental health issues. Also, this specialized training is time-consuming and an optional part of a pediatrician's training, so many

pediatricians choose not to pursue this path of study.

Benefits of PCP Collaboration with Psychologists

As previously stated, primary care physicians require extensive and time-consuming specialized training to improve their assessment and identification of psychosocial problems. A practical alternative to this specialized training is for pediatricians to form collaborative relationships with local mental health professionals. The usefulness of this collaborative relationship was first discussed in the 1960s (Drotar, 1995). Collaboration is not a new concept. In fact, many areas of the country have been involved in interdisciplinary collaboration for years. And while the acceptance of the benefits of collaboration is not new, there is still debate regarding the best model or format for the relationship. Also, there are more rural areas of the country where collaboration is still a new concept.

Authors have presented evidence that consultation between mental health professionals and medical doctors can result in improved patient health outcomes. A study by Gelfand et al. (2004) suggested that psychological consultation had a positive impact on selected health outcomes of children with diabetes. The study looked at the outcomes of 91 psychological consultations requested by the children's pediatric endocrinologist. The majority of the children were referred for problems related to diabetes management, poor metabolic control, or mental health issues unrelated to diabetes (e.g., anxiety, depression, attention-deficit hyperactivity disorder). The children who received the psychological consultation had their HgbA1c (the measure of glycosolated hemoglobin used to provide an estimate of the average blood sugar for the last three months) decrease significantly from the time of referral, by an average of 0.8 percentage points. Given that a reduction of HgbA1c by one percent has been shown to reduce risk of long-term complications by approximately 35%, these results are clinically significant

(Gelfand et al., 2004). This study suggests that over 80% of patients improved their metabolic control when a psychologist was involved in their care (regardless of patient gender, socio-economic status, or ethnicity). These findings help to provide evidence that psychological collaboration and consultation in a pediatric clinic can have a positive effect on disease status for children with poor metabolic control (Gelfand et al., 2004). The weakness of this study was that it did not provide statistics for the decrease in HgbA1c over time for children not provided with psychological care, making it impossible to make comparisons across groups.

Another study has shown that collaboration between mental health professionals and medical doctors can result in improved child behavioral outcomes and parent satisfaction (Sobel, Roberts, Rayfield, Barnard, & Rapoff, 2001). The sample for this study consisted of 100 parents and their children who were outpatients at two pediatric primary care settings. Four psychologists participated in this study, and the mental health clinic was part of the pediatric outpatient service in a separate building within the medical center. The most common reasons for being referred to the mental health clinic were the assessment of school problems, behavior problems, anger, attention problems, depression, and temper tantrums (Sobel et al., 2001). Eighty-one percent of the patients saw a therapist for brief treatment (i.e., between 1-5 sessions), and behavioral treatments were administered for the majority. The children's behavior for which the parents sought treatment was rated by parents and therapists, and was found to have improved significantly from pre- to post treatment. Overall, the parents in the study were satisfied with the mental health services received. The pediatricians who referred the children also believed that the mental health clinic met the needs of the patients they had referred and were pleased with the positive outcome. This study reinforces the idea that physicians consulting with and referring their patients to psychologists regarding the mental health issues of their

patients results in improvement of the child's symptoms and in parent satisfaction.

Although the findings of these studies were helpful, there have been few researchers who have examined the physicians' opinions and needs regarding collaborative relationships with mental health professionals. In the studies cited so far, the model of collaboration was mostly consultative in nature. Other models have been proposed, but there is little comparative data on their effectiveness.

The few studies done on the factors that affect the amount of collaboration done by medical professionals with mental health clinicians found simply that greater exposure to mental health professionals during medical training increased their likelihood of referring a patient for psychotherapy. One such study by Bergman and Fritz (1985), surveyed pediatricians about their collaborative practices with psychiatrists and other mental health providers. They found that pediatricians who reported fewer contacts with psychiatrists during their training were less likely to refer a patient for psychotherapy and less likely to consult with a mental health professional on a patient's case than those who reported a greater number of contacts during training. In addition, those who received more training in developmental or behavioral pediatrics were more likely to refer to a mental health professional for therapy (Bergman & Fritz, 1985). However, all pediatricians preferred to refer to a behaviorally oriented pediatrician for treatment of psychosocial problems rather than a psychologist, psychiatrist, or social worker. Though informative, this study is over 25 years old.

The second major study was slightly more recent, and concentrated on the collaborative relationship between pediatricians and psychologists. The study conducted by Guttentag (2000) surveyed a national sample of psychologists and pediatricians regarding the types of collaborative relationships (e.g., research or clinical) they engaged in, the frequency of

collaborative contacts, and the positive and negative characteristics of their collaborative relationships. Pediatricians who endorsed greater professional experience with psychology and more contact with individuals in the mental health profession reported engaging in more types of collaborative activities with psychologists (e.g., professional meetings, research, and clinical work; Guttentag, 2000). This shows that the greater amount of exposure a pediatrician has to psychologists, the more likely the pediatrician is to seek collaboration with a psychologist regarding a patient. Therefore, pediatricians who have limited knowledge of psychology, who may need the most collaboration with someone in the mental health field, are less likely to seek this collaboration or refer patients for psychotherapy than pediatricians who have had greater exposure to mental health professionals. Neither of these studies looked at the impact of collaboration between medical professionals and psychologists on diagnosis, problematic behaviors, or treatment decisions. This lack of current research supports the need for a more in-depth and current review of the collaborative relationship between primary care physicians and psychologists.

Rural Integrative Care

A study done by the Maine Rural Health Research Center (2009), found that 20% of all children have a mental illness. Of that 20%, only just over one third received at least one mental health visit in the last year (Lambert, Ziller, & Lenardson, 2009). The prevalence of children with a parent-reported mental health problem is very similar in rural and in urban areas. However, the children with mental health issues from rural areas were less likely to use mental health services. Controlling for other characteristics that affect access to care, children from rural areas are twenty percent less likely to seek help from a mental health professional than children from urban areas (Lambert et al., 2009).

In 2004, The New Hampshire Rural Health Report explored the differences in health and non-health related statistics between rural and non-rural parts of the state. The study looked to identify and quantify differences in health care access, underlying demographics, health outcomes, and health related behavior (New Hampshire Department of Health and Human Services, 2004). The rural definition used for this report is based on a “buffered” population density approach, using town-level units of geography. The findings of this study revealed that there are significant and observable differences between the health profiles of New Hampshire’s rural and non-rural communities.

The study found that residents of the rural parts of the state were significantly poorer, older, and less educated than non-rural residents. Also, while the total number of primary care providers in rural areas increased faster than in non-rural areas, access to pediatricians and obstetrician/gynecologist providers was more limited (New Hampshire Department of Health and Human Services, 2004). In the rural areas of the state pediatricians and obstetricians comprise only 14% of providers, compared to 33% in the non-rural tier. Rural residents were also significantly less likely (11.7% compared to 7.9% in non-rural areas) to be insured for health services, but more likely to be on Medicaid than non-rural residents. There were also 48% more psychiatric hospitalizations of residents in rural areas compared to non-rural areas (New Hampshire Department of Health and Human Services, 2004). One possible explanation for the higher admission rates that has been suggested is the greater difficulty in managing mental health issues in the community setting due to a lack of service providers. The average length of stay for rural psychiatric admissions was 6.6 days, compared to 7.8 days in non-rural areas. The shorter length of stay supports the concept that in rural areas people are managing less complex mental health conditions in an inpatient setting (as opposed to seeing a mental health professional for

outpatient therapy). The researchers felt that the differences in the health statistics of rural versus non-rural residents might have been even greater if it were not for the many rural initiatives already in place to alleviate some of the differences (New Hampshire Department of Health and Human Services, 2004).

Fox, Blank, Roynyak, and Barnett (2001) found that people living in rural areas are presented with unique challenges in obtaining adequate mental health care. There are geographic, cultural, and economic barriers present in rural areas that may not be a problem in more urban environments (Fox et al., 2001). The occurrence of psychiatric disorders is roughly equivalent in both rural and urban areas. However, the access to proper mental health care is not. Isolated rural areas were found to be significantly less likely to have a community mental health center (Merwin, Snyder, & Katz, 2006). One review found that in 42.9% of rural communities there was no mental health service provider available locally. In fact, 6.5-9.4% of emergency room visits per week in rural areas involved a mental health issue as the patient's primary complaint (Hartley et al., 2007). Although informative, a negative of this article was that it did not provide data on the psychological needs of urban populations. This lack of comparative data made it difficult to fully comprehend the differences between the needs and available services in urban versus rural areas.

This lack of local mental health resources means that many residents in rural communities rely on their primary care physicians or emergency rooms to treat their mental health issues. However, there is a lack of training in medical school for how to make and most effectively use psychological consultations and referrals (Harowski, Turner, LeVine, Schank, & Leichter, 2006). Therefore, medical professionals may have a difficult time efficiently using the few mental health resources they do have available to them. Another hurdle in obtaining the

necessary mental health care in rural communities is that rural health service systems have fewer specialty mental health providers than metropolitan areas. One study found that the largest discrepancies between rural and urban areas were found in the availability of health care providers in the areas that required the most education and training (i.e., psychiatry, psychology, and specialized primary care medicine). This results in residents of rural areas having less access to mental health providers than residents of urban areas (Johnson, Brems, Warner, & Roberts, 2006). Therefore, it is especially important for primary care physicians and mental health professionals in rural areas to develop effective collaborative relationships with the few service providers in the area, so that members of the community can receive ample mental health services.

A study done by Human & Wasem (1991) delineated availability, accessibility, and acceptability as the three most important aspects to consider in providing mental health care to rural communities. Availability is related to the existence of mental health services (Human & Wasem, 1991). Accessibility refers to whether individuals in rural areas can actually receive existing services (e.g., do they have insurance), including whether they can actually get to the mental health offices (e.g., difficulty traveling long distances without the benefit of public transportation). Accessibility also deals with the lack of mental health outreach available in isolated communities (Human & Wasem, 1991). Acceptability deals with the services being offered in a way that is consistent with the value system of the community. Common barriers to acceptability in rural areas are beliefs about the etiology and treatment of mental disorders, stigma and lack of education about the mental health profession and mental illness, as well as a belief that people should be able to handle their problems themselves (Human & Wasem, 1991).

Many studies agree that it is the rural cultural values regarding mental health and mental

illness that are the biggest obstacles to overcome. Many individuals living in rural communities in America have a lack of education regarding mental illness, psychotropic medication, therapy, or mental health care in general and hold stereotyped views (Smith, 2003). While it is unclear exactly why there is such stigma surrounding mental health in rural areas, it may be due in part to insufficient resources, isolation, and the value of autonomy. Stigma has been found to not only dissuade people from seeking mental health services, but also to hinder progress once people begin treatment (Smith, 2003). Rural communities are often known for being like “fish bowls”, where everyone knows everyone else’s business. Therefore, even if people don’t have their own stigmatized views of mental health, they may be concerned about how others might perceive them. Rural communities are also known for having a strong sense of individualism, a “pull yourself up by your bootstraps” mentality where people are supposed to solve their own problems (Smith, 2003). These findings imply that even if mental health services were more available in rural areas of the country, it would likely take time and education regarding mental health issues before the mental health services would be widely accepted.

Models of Collaboration

Drotar (1995) described four main models of collaboration/consultation in pediatric psychology. The first, and most similar to medical consultation, is the *independent functions* model. This model allows a psychologist to function as a specialist who provides diagnosis and treatment of a patient referred by the pediatrician (Drotar, 1995). The positives of this model are that it only requires limited time, and pediatricians are comfortable with the more medical format. The drawbacks of this model are that there is limited communication, relationship, and coordination of care between the physician and the psychologists, resulting in limited teaching opportunities and discussion of management alternatives.

The second type of collaborative model described by Drotar (1995) is the *indirect consultation* model. In this model the pediatrician retains sole responsibility for clinical management, while the psychologist takes the role of teacher. As the teacher, or informed colleague, the psychologist provides advice, teaching, or protocols to the physician to assist them in patient management. This model is also referred to as informal hallway consultation (Drotar, 1995). Examples of the psychologist's duties in this model include answering the question of whether a behavior is age appropriate, suggesting possible interventions, interpreting psychological test data, educating the pediatrician on available community services, and communicating the need or appropriateness of a referral for psychological services. This model is most effective if it involves continuing interactions on the management of clinical problems. The negatives of this model are that pediatricians may not have to implement suggestions, may become frustrated by the psychologist's teaching, and it may be difficult to generate practical solutions to complex problems (Drotar, 1995).

The third model suggested by Drotar (1995) is the *collaborative team* model. It involves shared responsibility and joint decision making between psychologists and pediatricians. This type of relationship cannot be forced. It evolves among individuals who have worked together effectively over time and gradually negotiate each team member's roles and working styles (Drotar, 1995). This model emphasizes the sharing of expertise of different disciplines in clinical management, research, or teaching roles. Team members can really benefit from this model and may even change their modes of functioning to operate in new ways (Drotar, 1995). For example, a psychologist may become more knowledgeable about differential medical diagnoses or a pediatrician may learn to obtain family history and include other family members in treatment like a social worker. The disadvantage of this model is that it can be hard for team

members to learn from one another while still maintaining their unique professional and personal contributions. It is also a very time-consuming model. Organization and leadership of a team are critical to a successful collaborative team consultation.

The final model Drotar (1995) discussed is the *systems oriented* approach. This model involves the efforts of multiple people in multiple settings. It deals with planning interventions at several different levels and involves multiple professionals. A systems approach can be used to develop more optimal patterns and settings of care delivery and professional roles. This can be accomplished through a task force made up of multiple professionals from different disciplines (e.g., psychologists, pediatricians, social workers, nurses). An example of this type of collaboration would be a committee of different professionals working toward creating a new hospital program where children's emotional needs would be given just as much weight as their physical status (Drotar, 1995). The disadvantage of this model is the degree of difficulty in implementing it. There are already many different systems-related problems at the different levels of this model and it can be very overwhelming to try to coordinate efforts. Unfortunately, managed care's increasing influence over the reimbursement and delivery of mental health and medical services make the usage of some of these models financially impractical and organizationally impossible. Recently, however, there have been large reforms made to the healthcare system which are actually rewarding collaboration between mental health and medical professionals. These changes are discussed further in the section below.

Influence of Managed Care

Over the years, as managed care becomes more and more involved in health service delivery, it alters the ways in which health care professionals work (Dymond, 1999). Most recently, President Obama altered the managed care system drastically when he passed the

Health Reform Law or the Affordable Care Act of 2010. The home health provision of this act provides an opportunity to create a person-centered system of care that would theoretically lead to improved outcomes for beneficiaries and better services and value for state Medicaid programs. More than a quarter of all Americans have multiple chronic conditions and this number rises to 2 out of 3 in older Americans (U.S. Department of Health & Human Services, 2011). The treatment for these individuals accounts for 66% of the country's health care budget. Substance Abuse and Mental Health Services Administration (SAMHSA), awarded \$34 million in new funding to support the Primary and Behavioral Health Care Integration Program. The aim of this program is to promote the integration of care for people with co-occurring conditions (U.S. Department of Health & Human Services, 2011). This program seeks to improve the physical health status of people with serious mental illnesses by backing community-based efforts to coordinate and integrate mental health services with primary health care in community-based behavioral health settings (SAMHSA, 2009). The belief is that through better coordination and integration of primary and behavioral health care there will be improved prevention, improved access to primary care services, early identification and intervention to prevent serious mental health issues, as well as improved overall health status for individuals.

One of the ways in which SAMHSA hopes to achieve this collaborative care is through health homes. Health homes are not physical places, per se, but are a strategy for helping individuals with chronic conditions manage those conditions in a more effective way (Clay, 2010). An eligible individual would be able to select a provider or team of health care professionals to be his or her health home. That home is then responsible for coordinating all the individual's care, which may include: promoting good health, helping with transitions from one setting to another, managing and coordinating all of the services the person receives from

multiple providers, providing support to the individual and his/her family members, and offering referral to community and social support services (Clay, 2010). These health homes would be extremely helpful in organizing the care of people with mental health and substance use disorders. Individuals with chronic illnesses tend to have more complex and long-standing needs, and often have a variety of different providers involved (Clay, 2010). These multiple providers do not always communicate with each other and may never have the opportunity to see the whole person, just the illnesses they treat. The new provisions of the Affordable Care Act will allow Medicaid to reimburse providers for time spent on the vital tasks of coordinating interdisciplinary care, or meeting with family members to support an individual's recovery (Clay, 2010).

States began offering the health homes option in January 2010. The legislation also features a "sweetener," which is a 90% federal match for the first two years, to encourage states to add health homes to their list of benefits (Clay, 2010). States that are interested in incorporating health homes in their Medicaid programs must submit a state plan amendment to the Centers for Medicare and Medicaid Services. SAMHSA will provide assistance to states with prevention and treatment services for those with mental and substance use disorders. The law requires states to consult with SAMHSA on their proposals' behavioral health aspects.

As discussed in the preceding paragraphs, this new health reform legislation will have a drastic influence on collaboration with mental health professionals. It provides financial incentives for communities to develop health homes, and is offering grants for states interesting in transitioning to this new type of health team. This type of financial assistance may enable communities that do not already have collaborative relationships between mental health professionals and pediatricians to establish that connection.

Previous Studies on Collaborative Care

The Maine Health Access Foundation undertook a long-term initiative in the hopes of promoting patient and family-centered care through integrative care services in Maine (Gale & Lambert, 2009). Phase one included an environmental scan, which included a literature review on administrative, clinical, financial, and regulatory barriers to integration and a review of integration initiatives in Maine and other states. In phase two, representatives from Maine's business community, payers, purchasers, professional associations, state legislators, advocacy organizations, state government, and provider organizations were interviewed to provide a context to understand the barriers to integration in Maine (Gale & Lambert, 2009). Four main themes emerged from this study: (a) sustainability of integrated services remains a unresolved problem; (b) the concept of integration has strong support among providers, consumers, and policymakers; (c) there are no easy solutions for sustainability; and (d) the impact of integration on quality, access, and effectiveness of care in Maine needs to be studied to support change (Gale & Lambert, 2009).

Overall, this study found that there is a strong interest in the integration of behavioral and physical health services (Gale & Lambert, 2009). While there is no question that the concept of integration was endorsed by all participants, there was little consensus about what the term integration meant. The stakeholders interviewed for this study tended to fall into two groups regarding their understanding of integration activities. One group included those who were interested in integration within an existing provider setting (e.g., co-located models; (Gale & Lambert, 2009). Usually, these were primary care providers who were interested in integrating behavioral health services into their practice settings, based on the evidence that patients with chronic behavioral health conditions often receive inadequate general health care. The second

group included people interested in integration across provider settings (e.g., collaboration without co-location or collaborative referral relationships; (Gale & Lambert, 2009). This group included providers working with patients with complex needs whose needs could not be met within one setting, as well as providers without the resources (financial, physical, or staffing) to expand their service capacity to include integrated services. Providers reported that having the availability of on-site services did improve the likelihood that an individual referred for behavioral health care would actually follow up on the referral (Gale & Lambert, 2009). Many primary care physicians also felt that they lacked the knowledge and time to actively participate in integrated services. Respondents also suggested that there should be greater focus on mental health and substance abuse services, specifically the use of screening tools, for primary care providers (Gale & Lambert, 2009). Many respondents also encouraged support for the health homes model (discussed previously) as an approach that might enhance integration. Respondents felt as though incentives (e.g., federal funding & reimbursement matching) are needed to encourage PCPs to participate in the health homes model (Gale & Lambert, 2009). The findings of this study were helpful, but focused mainly on the barriers to collaboration. It did not consider specific aspects of the collaborative relationship the primary care physicians would find most helpful.

Younes et al. (2005) also looked at general practitioners' opinions on collaborating with mental health professionals. This study found that 43.3% of general practitioners felt a need for collaboration with a mental health professional, and within this group, only 35.3% felt that this need was being met. In cases where needs were not met, 64.1% of general practitioners felt that they did not know what type of collaboration to seek (Younes et al., 2005). Many general practitioners preferred to refer because they lacked confidence with this type of care (48.3%), but

also because treating these types of patients was time consuming (17.8%). The more emphasis the general practitioners put on collaboration, the more positive they evaluated their relationships with the mental health professionals to be (Younges et al., 2005). While this study was able to show that most general practitioners were interested in collaboration with a mental health professional, it did not ask the doctors their ideas about what types of collaborative relationships would be most helpful.

Dymond (1999) did her dissertation on the interdisciplinary collaboration between psychologists and primary care physicians. She wanted to explore the effects that professional, personal, and organizational factors had on the collaborative relationship. PCPs and psychologists reported many problems in their efforts toward collaboration. Areas of hesitancy for PCPs were their lack of knowledge regarding psychologists' training and credentialing, practice parameters, the psychologist's role in health care, and how psychologists work with patients (Dymond, 1999). Time, access, and proximity were also identified as impeding factors. Other professional factors found to be hindering collaboration included physician intimidation, language barriers, and devaluation of the profession of psychology (Dymond, 1999). The personal factors that were reported as interfering included poor appearance and approach style of psychologists, as reported by physicians. Physicians also added that divergent beliefs between the professionals and a lack of a personal relationship also impeded collaborative efforts (Dymond, 1999). However, both PCPs and psychologists agreed that it was organizational factors that seemed the most influential in limiting collaboration. Participants reported that lack of administrative and institutional support, access problems, and billing/reimbursement by managed care organizations were the most problematic (Dymond, 1999).

Suggestions were made by both PCPs and psychologists as to how to improve

collaboration. Participants suggested that there needs to be increased education by psychologists for both physicians and administrators to clarify psychologists' role, training, and contribution to health care (Dymond, 1999). Another suggestion made by physicians was that closer proximity of practices, increased contact, and psychologist involvement on hospital staffs are both needed and wanted. Physicians and psychologists both agreed that a change in attitude towards one another, approach style, and having an agreed upon communication modality would be essential to improving collaboration (Dymond, 1999). Dymond's study focused on the overall factors that influence a collaborative relationship, and made broad suggestions as to how to improve the relationship. However, it did not address specific collaborative models or follow-up contact that would have made the collaborative relationships more useful to the PCPs.

Chapter 3: Method

Research for this study was completed through qualitative data collection conducted by surveying participants through the mail. The data collection occurred over the course of one month. The survey took approximately 10 minutes to complete, and the participants were provided a self-addressed, stamped return envelope. Thirteen surveys were completed, but two participants did not include a signed informed consent so their data were not included in the analysis. Means, medians, and modes were calculated for each question to gain a greater understanding of the basic trend of the topics studied.

Participants

Participants included five pediatricians, four family practice doctors, and two nurse practitioners working at five medical clinics in Belknap County, New Hampshire. These clinics were in the beginning stages of forming a collaborative relationship with community mental health centers. At the time, the medical professionals referred patients for psychological intakes when they felt a child might benefit from psychological care. However, there was no specific policy for what happened after the intake. There was also no assessment of what type of information sharing would be most helpful to the medical professional.

There were seven female respondents and four males. The mean age of the females was 42 years and median was 41 years. The female participants had been practicing medicine for a mean of 12 years and a median of 12 years. The mean age of the male respondents was 59 and the median age was 59.5. The male participants of the study had been practicing medicine for a mean of 28 years and a median of 30 years. Forty-five percent of the respondents almost exclusively saw children under the age of 18. However, for another 45% of respondents, their patient populations under age 18 were less than 25%. One participant indicated only 25-50% of

their case load consisted of patients under the age of 18.

Measures

A survey addressing the frequency and type of medical professionals' collaboration with mental health professionals for pediatric patients with mental and behavioral health problems was distributed to participants through the mail. Some survey questions were collected from existing literature (Salmon & Kemp, 2002; Sices, Feudtner, McLaughlin, Drotar, & Williams, 2003). Other questions were created in an attempt to gain information about medical professionals' opinions regarding collaborative care of minors, an area of research that has not been extensively explored in past studies.

The survey contained questions focused on what medical professionals would find most helpful in a collaborative relationship with local mental health professionals. The questions dealt specifically with what information participants thought would be most useful for them to receive from mental health professionals, as well as what type of follow-up relationship they would like to have had with the mental health professionals. The survey assessed what types of mental and behavioral health screening tools were used by medical professionals most frequently. It also looked at how often they collaborated with different types of mental health professionals. Please see Appendix A for a copy of the questionnaire.

Procedures

Participants for the study were recruited by contacting the pediatricians, family practice clinicians, and nurse practitioners at clinics that fall under the LRGHealthcare catchment area. These clinics included Laconia Clinic, Westside Healthcare, and Belknap Family Health which were medical clinics in Belknap and Meredith County, New Hampshire. The questionnaires were mailed to the offices of the medical professionals, with a flyer introducing the study and its goals

to the participants (see Appendix B). A self-addressed, stamped return envelope and a copy of the informed consent were included to increase the ease of response for the participants. The data were collected over a month, to ensure participants had ample time to complete the questionnaires. This also allowed medical professionals to experience referring clients to mental health professionals, and gave them time to think of ways to improve the process.

Data Analysis

The data were analyzed using descriptive statistics to provide a summary and comparison of all major factors studied. The goal of this exploratory study was to gain a general sense of the mental health issues encountered most by medical professionals, their level of comfort in assessing and treating these disorders, what (if any) type of collaborative relationship the medical professionals currently had with a mental health professional, and what type of collaborative relationship participants believed would be most useful to a medical professional in a rural setting. Descriptive statistics for these expectations can be found in Figures 1 through 7.

Chapter 4: Results

The underlying expectation for this study was that medical professionals practicing in rural settings would not be satisfied with their current access to mental health professionals and that there would be a number of barriers to achieving a desired collaborative relationship. A survey, similar to ones used in studies by Salmon and Kemp (2002) and Sices et al. (2003), was created to assess the wants and needs of medical professionals in collaborative relationships with mental health professionals. The studies discussed above examined collaborative needs of medical professionals and included information on their exposure to specific mental health issues (e.g., attention-deficit hyperactivity disorder and depression). Although the sample was too small to support hypothesis testing, it was expected that:

- Medical professionals would desire greater collaboration with mental health professionals than is currently available at their facility.
- Medical professionals would not believe they have had adequate training to feel comfortable recognizing and treating mental health disorders.
- Medical professionals would prefer the *collaborative team* model, but would feel as though the *independent functions* model would be more feasible to implement.

Eleven rural medical practitioners were asked about their collaborative practices with mental health professionals. Just over 91% of the sample (n=10), or all but one participant, agreed or strongly agreed that they would collaborate more often if there were a mental health professional on staff at their place of work. Approximately 72% of the participants (n=8) indicated that they knew of a mental health professional with whom they could collaborate. However, about 81% of respondents (n=9) also indicated they would like to increase the frequency of collaborations with mental health professionals. Approximately 72% of participants

indicated that they had a part-time mental health professional on staff within their clinic. These findings can be found in Figure 1.

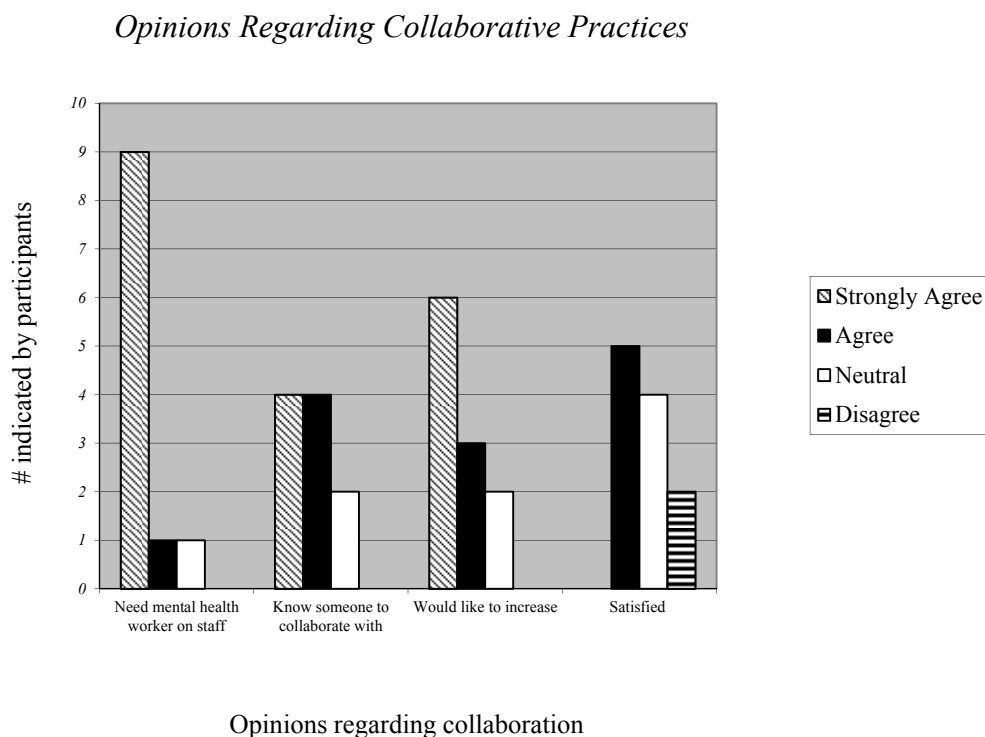


Figure 1. Opinions regarding collaborative practices. Opinions referenced are: I would consult/collaborate more frequently if there was a mental health professional on staff at my place of work (Need mental health worker on staff), I know of mental health professionals with whom I could collaborate (Know someone to collaborate with), I would like to increase the frequency of my collaborations with mental health professionals (Would like to increase), and Overall, I am satisfied with the collaborative relationships I have with mental health professionals.

As predicted, 100% (n=11) of the respondents indicated very little training to deal with mental health issues. The respondents with the most training, which usually included psychological rotations, were the nurse practitioners and family practice doctors. Primary care physicians generally reported no training or very little training, usually only in the form of some exposure during residencies. Also, three of the respondents used no psychological symptom or

behavioral inventories to assess for mental health issues. Five of the respondents reported using the Vanderbilt ADHD Assessment Scale, and three use the Beck Depression Inventory to assess behavior. One practitioner endorsed using multiple scales, mnemonics, and inventories. These results can be found in Figure 2 and Figure 3.

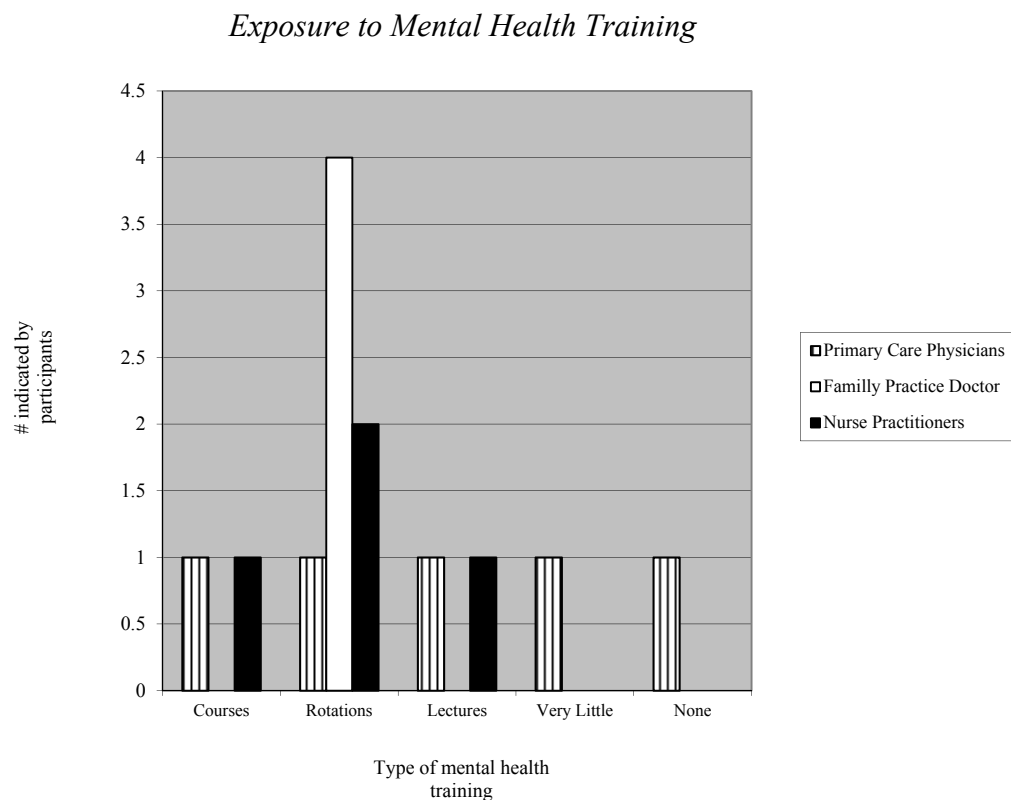


Figure 2. Exposure to mental health training. Trainings refer to mental health trainings provided for the physicians during their schooling.

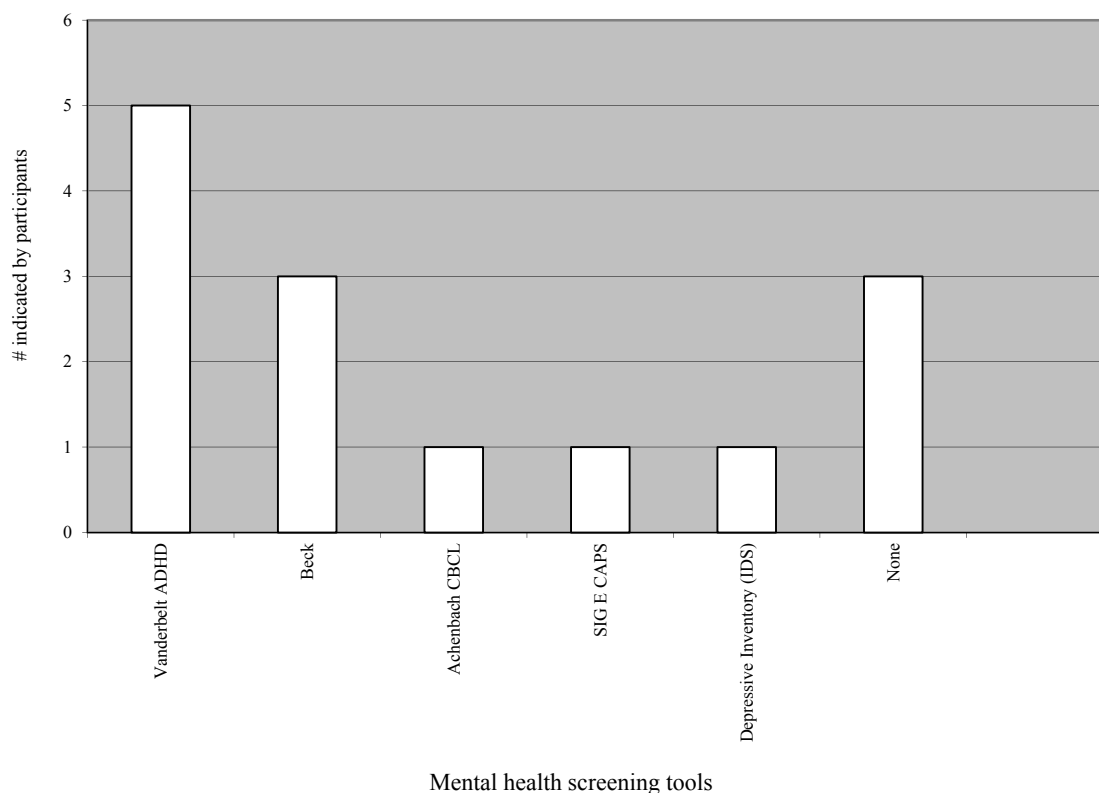
Use of Mental Health Screenings

Figure 3. Use of mental health screenings. The screenings referenced are The Vanderbilt ADHD Assessment Scale (Vanderbelt), Beck Depression Inventory (Beck), Achenbach Behavior Child Behavior Checklist (Achenbach), SIG E CAPS mnemonic (SIG E CAPS), and the Inventory of Depressive Symptomatology (Depressive Inventory-IDS).

The third question addressed which model of collaboration the medical practitioners would desire and which model they felt would be easiest to implement at their facility. The expectation was that the majority of practitioners would desire the *collaborative team* model, but would feel as though the *independent functions* model would be most practical at their clinic. As predicted, 63% (n=7) of respondents felt that the *independent functions* model would be most practical (versus three who chose the *collaborative team* model). However, the expectation was not supported regarding which model would be most desired. The respondents were split evenly between 50% (n=5) who selected the *independent functions* model and 50% (n=5) who chose the

collaborative team model (one respondent chose ‘not sure’). This showed that contrary to the expectation, even when practicality and ease of implementation of the collaborative model was not an issue, respondents were divided in their choice of which model would be most useful (See Figure 4).

Preferred vs. Practical Models of Collaboration

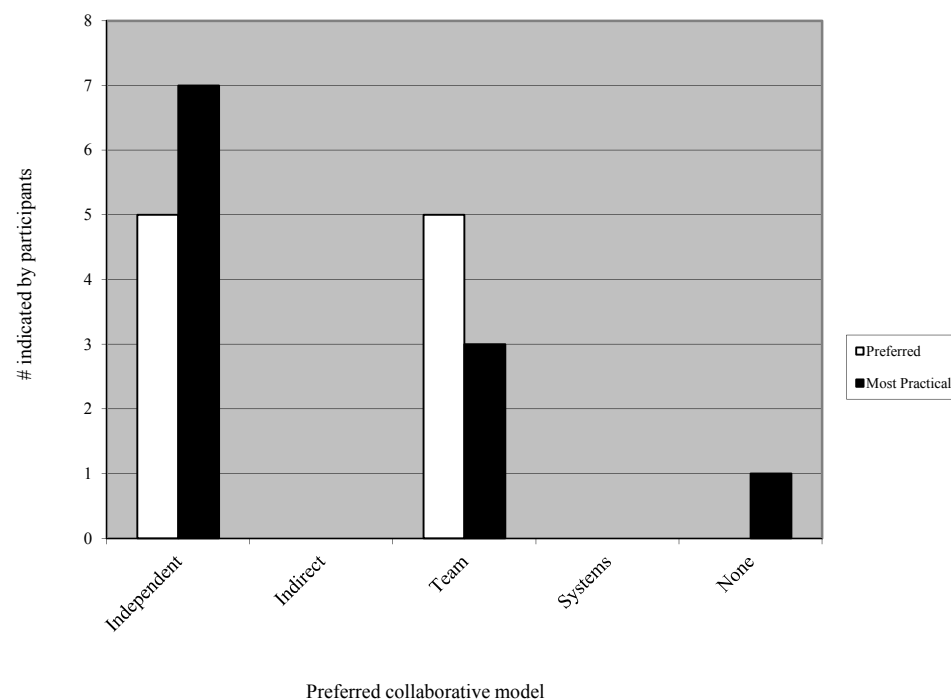


Figure 4. Preferred vs. practical models of collaboration. The models of collaboration are Independent functions model (Independent), Indirect consultation (Indirect), Collaborative team model (Team), and Systems approach (Systems).

The question of the medical professionals' purposes for collaboration was also addressed. Each participant surveyed (n=11) indicated that their reason for collaboration was both to obtain psychological treatment as well as to acquire psychiatric services (e.g., medication) for their patients. Just over 90% (n=10) of participants indicated that they collaborated with mental health professionals for diagnostic clarification. Approximately 81% (n=9) expressed collaboration in

an effort to help manage behavior related to the cause or treatment of a physical health condition (e.g., help obtaining compliance for patient in diabetes care). However, only 54% (n=6) said that they desired collaboration with mental health professionals for ongoing consultation (which would involve continuous and open communication between professionals). These findings are presented in Figure 5.

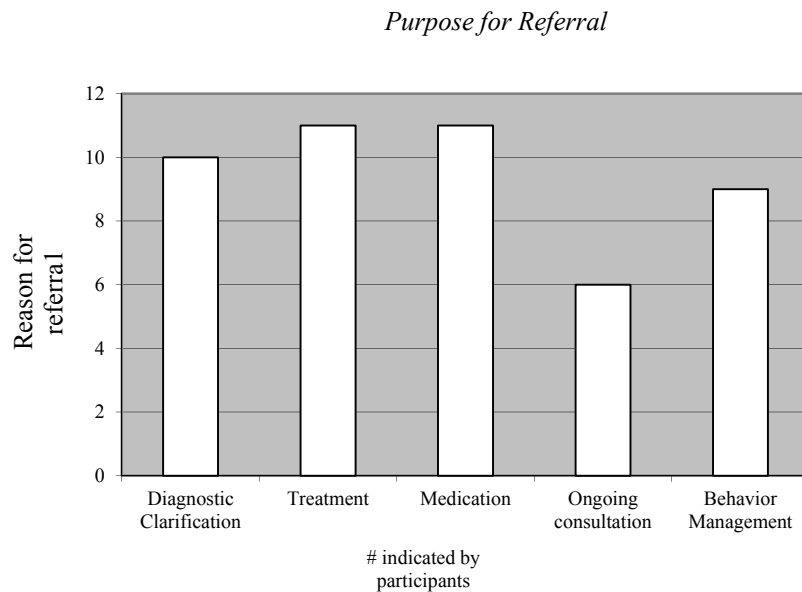


Figure 5. Purpose for referral. Collaborative purposes displayed include help with managing behavior related to the cause or treatment of a physical health condition (Behavior Management), for ongoing consultation, to obtain access to psychiatric services (Medication), to obtain psychological treatment for patient (Treatment), and Diagnostic Clarification.

The medical professionals were also surveyed regarding what follow-up contact they desired from mental health professionals. Ten of the participants desired to be told a diagnosis for their patient, as well as wanted to be given a treatment plan indicating how the mental health professional planned to work with the patient to address the mental health issue. Ten of the participants said that they would be interested in having only periodic, yearly scheduled check-

ins with the mental health professional. Nine of the physicians wanted information on what psychotropic medication their patient was placed on. All of the participants indicated they wanted some type of follow-up contact.

In addition to how much follow-up was wanted, the type of follow-up communication desired by the participants was also asked. Eight participants indicated that e-mail contact was best. Five participants endorsed a desire for phone contact, and four wanted information to be faxed to them. Only three participants indicated wanting face-to-face contact. One participant even submitted an addition which was to be mailed a hard copy of any information about their patient. Findings are displayed in Figure 6.

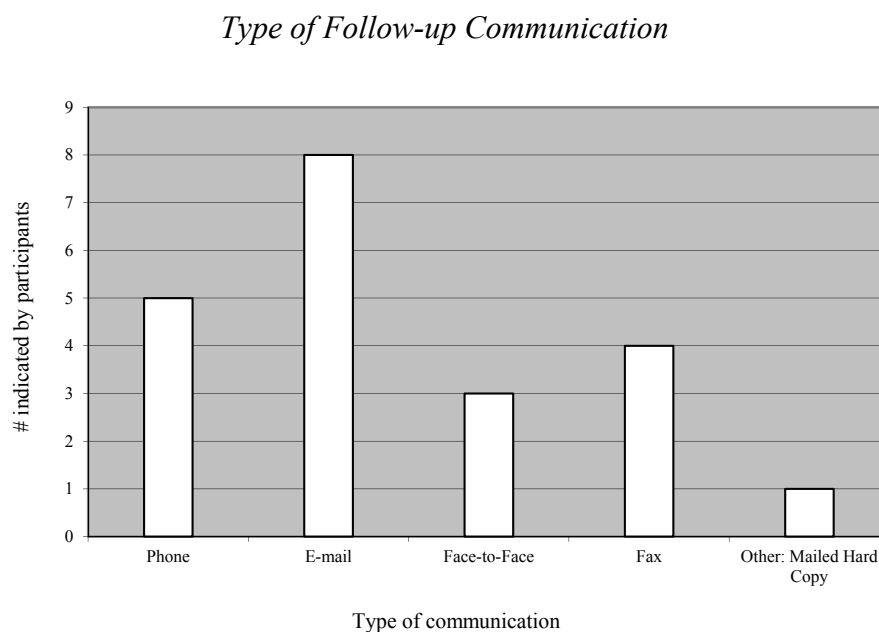


Figure 6. Type of follow-up communication. In this figure, Other refers to a mailed hard copy of patient information.

The survey also asked about the frequency of collaboration conducted by participants

over the past year with different types of mental health professionals. Some participants collaborated with social workers, psychiatric nurses, and mental health counselors on a weekly basis. However, they collaborated most often with clinical psychologists, social workers, and mental health counselors on a monthly basis. They typically collaborated with psychiatrists and psychiatric nurses on a yearly basis (See Figure 7).

Frequency of Collaboration with Mental Health Professionals

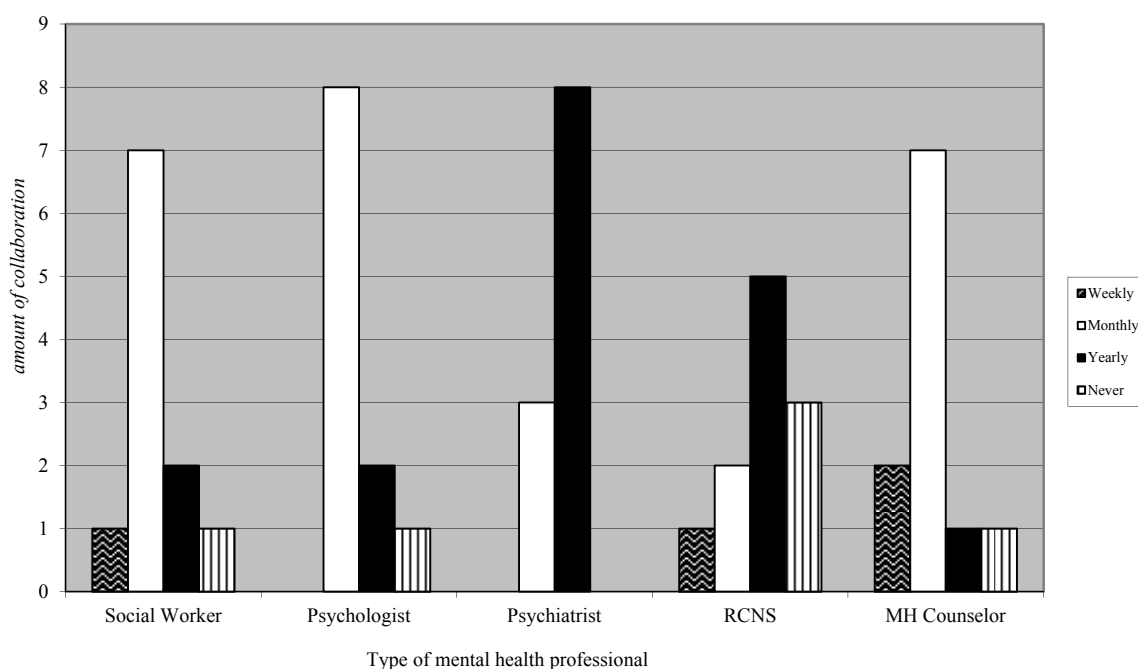


Figure 7. Frequency of collaboration with mental health professionals. In this figure, RCNS represents the category psychiatric nurse and MH Counselor represents mental health counselor.

Another topic assessed through the survey had to do with the most prominent barriers that the medical professionals saw to collaborative care at their clinic. The most commonly endorsed answer (n=7) was that it was too time consuming. The next most frequently endorsed barriers

(n=4) were proximity (e.g., distance to mental health clinic) and lack of knowledge regarding available mental health services. Financial issues (e.g., reimbursement issues with managed care) were endorsed by two participants. One participant cited access to mental health providers as the biggest barrier.

A final topic addressed on the survey involved assessing the participants' knowledge of current health care reforms (e.g., Affordable Care Act, health homes, etc.). When asked how knowledgeable the physicians were on these health care reforms, two indicated *not at all* and nine endorsed *somewhat*. None of the participants felt they were *very knowledgeable* on the subject. Participants were also given an open ended question regarding how they felt these changes to health care would influence how and whether they collaborate with mental health professionals. Four of the participants indicated they were uncertain about how the reforms would influence their collaboration. Two felt it would not influence their collaboration with mental health professionals. Three felt the changes would be positive and the reforms would help to improve access to mental health professionals for collaboration. One participant felt the health care reforms might lead to budget cuts at their clinic. And one medical professional simply indicated the reforms would influence them, without providing any further detail.

Chapter 5: Discussion

Discussion of Results

In discussing the results of this study, I will first revisit relevant points from the literature review related to the present results. Some of the present results concur with the previous literature while others do not. Then I will address the original research questions on which the expectations were based with regard to the data acquired. The purpose of this discussion is to look at the meaning within the results of this study and to discuss what questions still remain. It will also explore the implications of the findings, as well as look at the how best to apply these findings to improve collaborative relationships.

In conducting this research, specific outcomes emerged that are important to discuss in relation to the original rationale for this study and the literature compiled. These outcomes include:

- Medical professionals' inadequate training in mental health issues.
- Medical professionals' desire for increased collaboration with mental health professionals.
- Opinions of medical professionals regarding the most desirable vs. practical models of collaboration.
- Lack of knowledge regarding recent healthcare reforms.

First, this research indicated that primary care physicians generally felt that they had inadequate training in dealing with patient mental health issues. Most primary care physicians reported that their only training in mental health came through limited lectures on the topic during medical school. However, all of the nurse practitioners and family practice clinicians

reported having more in-depth training in mental health. This included a psychological rotation during their residencies as well as required courses on psychology during their training. This is an interesting finding, because often clients of rural medical clinics end up seeing nurse practitioners as opposed to primary care physicians. This divide in the quality of training for medical professionals is supported by previous studies on this topic. A study by Leigh, Mallios, and Stewart (2008) found that about two thirds (68%) of primary practice training directors felt that their psychiatry training was optimal to extensive. However, within the primary care programs, there was a substantial difference between family practice (majority satisfied) and pediatrics (mostly unsatisfied). The conclusion that these researchers found was that psychiatry and primary care training directors (except in family practice) generally agree that psychiatry training in primary care programs is inadequate and needs to be improved (Leigh, Mallios, & Stewart, 2008). The fact that nurse practitioners and family practice doctors reported more exposure to mental health issues during their training, and are commonly employed by rural medical clinics, may act as an advantage for the clients of rural medical clinics coming in looking for help relating to a mental or behavioral health problem.

Physicians' lack of training also influences physicians' understanding of how mental health professionals can best be of help to them. If they do not fully understand what mental health professionals can provide, they cannot be sure of the benefits of collaboration, and thus do not know if they would like more out of the relationship. Therefore, it may be helpful for clinics to provide physicians with training on what mental health professionals do and how they may be useful to medical professionals. This way, physicians will have the knowledge necessary to make full use of what mental health professionals have to offer them and their patients.

Second, physicians reported a desire for increased collaboration with mental health

professionals. Almost all of the participants had mental health professionals on staff at their clinic on a part-time basis. However, almost all of the participants indicated that they would like to increase the frequency of their collaborations with mental health professionals. While almost all participants indicated they would like to increase their collaboration with mental health professionals, only two participants endorsed that they are not satisfied with the collaborative relationships they have with mental health professionals. Steele et al. (2010) surveyed rural and urban primary care physicians on the criteria used in referring children and adolescents for mental health services. The results of that survey showed that only 23% of the physicians practicing in rural areas had any formal training in child and adolescent psychiatry, versus 39% for physicians in urban areas (Steele et al., 2010). These findings again indicate that physicians may not be knowledgeable regarding what services mental health professionals can provide for them. So while they may wish to increase their collaboration with mental health professionals, they may not know if they are maximizing the benefits of their current collaborative relationships because they may not be clear about the potential services and advantages these relationships provide.

Third, an equal number of participants indicated that the *collaborative team* model and the *independent functions* model were the most desirable collaborative models. However, the *independent functions* model was endorsed by the majority of participants as being the most practical model to implement at their clinic. An additional three participants indicated that the *collaborative team* model would be most practical. This finding was surprising, because my initial expectation had been that medical professionals would find the *collaborative team* model most useful, but the *independent functions* model most practical. Instead the results of the study imply that medical professionals feel that the *independent functions* model would be most

desirable, even when time, cost, and ease of implementation are not factors. These findings may be related to the fact that medical professionals often have many pressures: including time pressures, productivity requirements, heavy patient loads, etc. Their busy schedules may not allow the time consuming cooperative approach required for the collaborative team model.

Participants in this study were provided with a description of each collaborative model described by Drotar (1995), so they had at least a limited understanding of each model. However, other physicians in rural areas may have limited knowledge or exposure to the different types of collaborative models. Therefore, they may not know which model they would prefer or what would work best for them. It may be helpful to provide training that outlines the benefits and drawbacks of each model, so that each clinic can decide which model would work best for them.

In terms of patient care, the *collaborative team* model would most likely provide the most inclusive and effective care from all professionals involved in the patient's care because the *collaborative team* model emphasizes knowledge sharing and teaching across disciplines (Drotar, 1995). This is consistent with findings from previous studies done on the barriers to collaboration. McDaniel (1995) found that the most obvious difference between the medical style and mental health care is the use of time. While most therapists spend 50-60 minutes with each patient, physicians are likely to only spend about 10-29 minutes. However, physicians also treat 4-5 times more patients per day than do psychologists. She reports that psychologists need to be sensitive to the time pressures that their medical colleagues are under and recognize that most conventions about communicating with medical providers are organized to heighten efficiency (McDaniel, 1995). So while this model may seem best for mental health professionals and patients because it involves continued collaboration between professionals from different disciplines, it may be too involved for physicians.

The results of this study also confirmed medical professionals' lack of knowledge regarding current healthcare reforms. The Affordable Care Act, one of the reforms included in this question, will directly impact the future collaborative care of the surveyed clinicians. Almost all participants indicated that they were somewhat familiar with the recent healthcare reforms. A small number of participants indicated no knowledge at all on the subject. Also, when asked how healthcare reforms would influence how the participants collaborate with mental health professionals, only one indicated that it would improve access and create fewer barriers to collaborating. Others reported being hopeful about the changes, but did not indicate any specific ways they anticipated the reforms would impact them. The other participants responded that they were either uncertain how the reforms would influence them, or that the reforms would not influence their collaborative practices. Medical professionals are often uninformed of changes and current reforms happening in the mental health arena. Because the Affordable Care Act will promote the creation of health homes, where all services (both mental and physical health) will be performed under one roof, medical professionals will very likely be influenced by this act. Many clinics will begin the transition to becoming health homes due to ease of providing a variety of services as well as the tax credits being offered by the federal government. Clearly, the results of this survey show that more education is needed on the topic of current healthcare reforms, as well as how these reforms will influence and affect the medical professionals' workplace, so they can be prepared for the coming changes.

One final finding that is worth discussing further is the physicians' desired method of follow-up communication. Almost all of the participants (n=8) indicated that they wanted follow-up contact through e-mail. This will have to be carefully implemented in order to comply with HIPPA's rules for confidentiality. The physicians and mental health workers would all have

to have their e-mail through the same server in order for e-mail communication to be considered an acceptable method of communication. Therefore, there would need to be a linking of the server of the medical clinic and mental health clinic before the physicians' request for e-mail contact could be implemented.

Limitations

This study included a very limited sample, in a very small portion of the New England area. Smaller, geographically restricted samples can be limiting with regard to the variation of the population sampled, the heavy influence of idiosyncratic responses, and exposing characteristics that are only present for that particular area of the country. Therefore, the information from this study should only be taken as exploratory and should not be generalized to larger populations without further study.

As this study focused on a participant group of only 11, effect sizes within the data set were too small to be considered valid. This is why only descriptive statistics were given for the data collected. It is difficult to study physicians, as they are often extremely busy and often carry very large caseloads of patients. Having a connection with the physicians being studied helped to increase response rates. Out of 25 mailed surveys, 11 completed surveys and two almost complete surveys (which were not included in the results) were returned for a response rate of 44% for completed surveys. This response rate was just under fifty percent, which is higher than most response rates. This is likely due to a previous connection this writer had to the sampled community. However, making use of a previous connection limited the sample to a small group of physicians working at three different clinics in a small geographic region. This increased the sampling bias of this study, and greatly limits its generalizability to a larger and more diverse population.

Another limitation of this study appears to be the homogeneity of the primary care physicians sampled. Almost all of the male pediatricians and family practice doctors surveyed had been in practice for over 20 years. The female pediatricians had been in practice for a much shorter amount of time, an average of 6.5 years (the female family practice doctor had been in practice for 22 years). It seems as though the physicians who have been in practice for a longer amount of time, reported less exposure to mental health training while in medical school. The few practitioners who are more recent graduates indicated experiencing more in-depth trainings on mental health issues (psychological rotations, classes on drug and alcohol abuse, etc.). Therefore, the sample may have been skewed in its assessment of the quality and quantity of the training on mental health issues doctors received in their training. By including a greater number of pediatricians that have been in practice for more than 20 years, the study may have under represented that amount of exposure to mental health issues that newly licensed doctors received during medical school.

Future Research Directions

The results of this study helped to illuminate some of the unmet collaborative needs of physicians working in rural areas, as well as how physicians feel that collaboration with mental health professionals can be most useful to their patients. However, it did not examine how best to put these findings into practice. The next step in future research for this subject area would likely be to create a more in-depth comparative study of different collaboration styles based on the findings of this, and other research in this subject area.

For instance, this study found that medical professionals lacked knowledge about what mental health professionals do, so it is not certain if they could evaluate whether they were receiving as much collaboration as they desired or needed. Previous studies on collaboration

found that increased face-to-face contact and educating physicians on mental health improved interdisciplinary collaboration (Dymond, 1999). Therefore, it may be useful to study how providing training to medical professionals regarding the role of mental health professionals in a primary care setting influences the effectiveness of the collaborative relationship. By providing the medical professionals with greater understanding of the role that mental health professionals play with both the patients and themselves, they may seek out collaboration more often and more effectively. Additional topics of interest for future research that emerged from this exploratory study included studying medical professionals' current collaborative practices in greater detail, mental health professionals' opinions and desires regarding collaborating with physicians, and solutions for barriers to collaboration in rural settings. Studying participant groups in different geographic regions would lead to further knowledge regarding physicians' opinions about collaboration across a variety of rural communities.

Another future research direction would be to assess the models of collaboration that rural clinics are currently using. For instance, surveying which of Drotar's (1995) models of collaboration (if any) the participants feel their clinic is currently using, and rating its level of usefulness and effectiveness for their unique needs would be very informative. This would likely reveal negative aspects or difficulties with the model that may have been unforeseen without this research.

While analyzing the findings of this study, a trend emerged that seemed to suggest that nurse practitioners and family practice doctors received more mental health focused training during their schooling. The nurse practitioners surveyed reported having specific psychological rotations and classes focusing on mental health issues (e.g., substance abuse, depression, etc.). The pediatricians, specifically the doctors that had been in practice for more than 10 years,

reported very minimal training on the topic of mental health. If nurse practitioners and family practice doctors truly are receiving more mental health focused training, then perhaps pediatric medical programs may want to model their training programs to include some of the core mental health focused classes. The study found that physicians who were trained a long time ago had less mental health training than more recently trained physicians. However, there was also a relationship between gender and how recently trained the physician was. Specifically, on average, the women who participated received more mental health training and were trained more recently than the men who participated. This connection among gender, mental health training, and timing of training makes it difficult to tease out the relationships among variables. Future research should try to untangle these relationships.

Recommendations

This exploratory study on medical professionals' collaboration with mental health professionals in rural areas indicated many limitations and areas for improvement. The most pressing area for improvement is physician education regarding the role of mental health professionals in primary care settings, as well as a basic understanding of how best a mental health professional can be helpful for patients. Therefore, it is recommended that any clinic collaborating with mental health professionals provide the physicians training regarding the role of mental health professionals in a medical setting. However, due to the limited free time available to medical professionals, it is also recommended that the training on mental health factors count towards their requirement for obtaining continuing medical education (CMEs) credits. This may be especially important for primary care physicians who experienced their medical training many years ago, when the significance of the interaction between physical and psychological issues was not yet highlighted during training. Collaboration with mental health

professionals was also not as common as it is today.

This study also exposed that there is a lack of knowledge regarding the Healthcare Reform Act by the physicians surveyed. One way in which medical professionals can become more knowledgeable about mental health issues and the Healthcare Reform Act would be for them to attend the monthly staff meeting of the mental health clinic they collaborate with. For instance, the LRGHealthcare medical clinics have a collaborative relationship with Genesis Behavioral Health, the community mental health center servicing Belknap and southern Grafton counties. Genesis holds a monthly training for newly hired employees in which they introduce the new employees to the unique mental health issues and needs of the population they will be servicing as well as the policies of Genesis. It may be useful for newly hired physicians to also attend these meetings, so that they can be introduced to the staff that they may be collaborating with as well as being introduced to the mental health services provided.

The study also indicated that many medical professionals (but not all) are using basic mental health screening tools to screen patients for mental health issues (e.g., depression, anxiety, attention-deficit hyperactivity disorder, etc.). This shows that some of the medical professionals surveyed are aware of the importance of screening for mental health issues. One recommendation to help to increase awareness of the importance of mental health screenings would be to have insurance companies (such as Medicare) require physicians to complete a Children's Assessment of Needs Survey (CANS) or other similar measures for all their pediatric patients. This transition will likely incur a lot of resistance from physicians, because it is a very time consuming and involved assessment. However, physicians in Massachusetts are already required to complete the CANS during a well-child visit, as part of The Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program through Medicaid. Each physician must

pass an online training on how to effectively use the CANS to assess for mental or behavioral health issues before they can become certified assessors. Because this is a requirement of physicians that must be completed in order for reimbursement for their services, it has become an accepted and integrated part of yearly well-child visits. However, the CANS is a time consuming and complicated assessment tool. There are many other simpler and less time consuming screening tools that may also serve the function of identifying patients who need further mental health services. For instance, the Achenbach System of Empirically Based Assessments (ASEBA) takes only 15 minutes for each reporter (e.g., parent, teacher, caregiver, youth) to complete and can be completed prior to a medical appointment (Williams, 2008). Additional brief screening methods have been developed that take between 10-15 minutes to administer including, but not limited to, the Pediatric Symptoms Checklist, Problem Behavior Inventory-Adolescent Symptom Screening Form, and Child Symptom Inventory-4 (Williams, 2008).

Future study in this area may involve conducting more in-depth research regarding the utility and ease of implementation of the available brief mental and behavioral health screening tools for use in medical settings. In fact, different instruments may be more practical and useful for different settings. But having physicians trained in methods of brief assessment of behavioral health issues will help increase their ability to accurately identify patients who may need additional mental health assessment or treatment. Making use of a screening tool with each patient would provide physicians with a structured and standardized way to document children's behavioral, emotional, and social symptoms. With a more accurate assessment of the presence of mental or behavioral health issues, the medical professionals may be better able to assess if collaboration with a mental health professional is warranted for a specific patient.

Further research on the area of the collaborative needs of mental health professionals

would also be a way to enrich knowledge of this subject area. Similar to research done on the opinions and needs of medical professionals, there are extensive studies that have been done on this topic. However, almost none of these studies focus on the unique needs and desires of practitioners working in rural areas. Mental health professionals practicing in rural areas find themselves in the unique position of not being surrounded by a large community of professional peers. Therefore, because there are fewer mental health professionals practicing in rural areas they are often sought out for collaboration by a larger number of physicians, and are needed to provide mental health services for a larger geographic area. By also addressing collaborative care from the opinion of mental health professionals in rural areas, a fuller and more robust plan for how best to develop this relationship could be obtained.

In conclusion, providing training and requirements that increase physicians' knowledge regarding mental health issues and what mental health professionals can provide to patients in primary care settings will likely make collaborative relationships between medical professionals and mental health professionals more successful. Also, creating a universal and standard practice for screening patients will likely improve physicians' ability to assess for mental or behavioral health issues more effectively and accurately. Each medical clinic beginning collaborative care may want to look at the research on collaborative models and decide which model would be most easily integrated into the culture of their clinic. Once a model is chosen, a standard practice for follow-up contact after collaboration should be established in order to create a less time consuming and more informative collaborative relationship for the medical professional. The standard follow-up procedure for collaborations could be created based on the medical professionals' wants and needs. Therefore, they would be able to efficiently use their limited time with the mental health professionals to obtain the information desired from the

collaboration.

As many as half of all pediatric medical visits have been estimated to reflect some sort of behavioral, psychosocial, or educational concerns (Steele & Roberts, 2010). Unfortunately, primary care providers for children and adolescents have been found to consistently under identify children with developmental and behavioral disorders. This is why collaboration between mental health workers and physicians working with children and adolescents is so important. A collaborative relationship between these two professionals allows for early detection, management, and treatment of the child's mental or behavioral health issues (Steele & Roberts, 2010). The concept of collaboration between medical and mental health professionals is not a static concept; it is ever-growing and ever-changing. As the medical and mental health world continue to evolve and head in the direction of multidisciplinary health homes, continued research regarding collaborative care will be necessary.

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Appendix A

1.

In this survey, you will be asked to answer 18 questions. The purpose of the survey is to gain a greater understanding of your exposure to children with mental health issues in your practice as well as obtain your view of collaboration with mental health professionals. Within the survey, the term "mental health services" is meant to encompass all mental health services (e.g. psychotherapy, psychological assessments, psychiatric services, etc.)

1. Please answer the following questions regarding your demographic information:

Age

2. What is your gender?

Gender

3. How many years have you been practicing medicine?

Years in practice

4. What is your percentage of patients under age 19?

☐ less than 25%

☐ 25-50%

☐ 51-75%

☐ 76-100%

5. Which type of practitioner are you?

☐ Pediatrician

☐ Family Practice Doctor

Other (please specify)

2. Mental Health Exposure

1. What, if any, experience and training with patient mental health issues did you receive during your medical training (e.g. electives, rotations, residency, etc.)?

2. Is there a mental health professional on your staff within your department?

- ☐ Yes, part-time
☐ Yes, full-time
☐ No

3. What, if any, psychological symptom or behavioral inventories do you use in your practice to assess for mental health issues (e.g. Beck Depression Inventory, Beck Anxiety Inventory, Vanderbilt Rating Scale, Achenbach Child Behavior Rating Scale, etc.)?

3. Collaborative Relationships

1. What is your opinion regarding collaborative practices with mental health professionals:

| | strongly agree | agree | neutral | disagree | strongly disagree | n/a |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I would collaborate/consult more frequently if there was a mental health professional on staff at my place of work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I know of mental health professional with whom I could collaborate | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would like to increase the frequency of my collaborations with mental health professionals | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overall, I am satisfied with the collaborative relationships I have with mental health professionals | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If you are uncomfortable referring clients to mental health practitioners for consultations please indicate why

2. With what purpose do (or would) you refer clients for a mental or behavioral health assessment?

- ☐ For diagnostic clarification
- ☐ To obtain psychological treatment for patient
- ☐ To obtain access to psychiatric services (e.g. medication)
- ☐ For ongoing consultation
- ☐ Help with managing behavior related to the cause or treatment of a physical health condition

3. After the consultation, what follow-up contact from the mental health professional would be useful for you? (check all that apply)

- ☐ None
- ☐ Diagnosis
- ☐ Treatment Plan
- ☐ Periodic Check-ins
- ☐ Medication

Other (please specify)

4. What type of follow-up communication would you like? (check all that apply)

- ☐ Phone
- ☐ E-mail
- ☐ Face-to-Face
- ☐ Fax

Other (please specify)

5. In the past year, what was your frequency of consultation/collaboration with the following types of mental health professionals:

| | Daily | Weekly | Monthly | Yearly | Never |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Social Worker | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Clinical Psychologist | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Psychiatrist | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Psychiatric Nurse | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mental Health Counselor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Other (please specify)

4. Models of Collaboration

Drotar (1995) described four main models of collaboration/consultation in pediatric psychology:

-The first model is the **INDEPENDENT FUNCTIONS MODEL**, which is the most similar to medical consultation. This model allows a psychologist to function as a specialist who provides diagnosis and treatment of a patient referred by the pediatrician. Positives of this model are that it requires limited time and pediatricians are comfortable with the more medical format. The negatives are that there is limited communication, relationship, and coordination of care between the physician and the psychologists, resulting in limited teaching opportunities.

-The second model is the **INDIRECT CONSULTATION MODEL**. In this model the pediatrician retains sole responsibility for clinical management, while the psychologist takes the role of teacher. The psychologist provides advice, teaching, or protocols to the physician to assist them in patient management. This model is referred to as informal hallway consultation. This model is most effective if it involves continuing interactions on the management of clinical problems. The negatives of this model are that pediatricians may not implement the suggestions, may become frustrated by the psychologist's teaching, and it may be difficult to generate practical solutions to complex problems.

-The third model is the **COLLABORATIVE TEAM MODEL**. This involves shared responsibility and joint decision making between mental health professionals and pediatricians. This model emphasizes the sharing of expertise of different disciplines in clinical management, research, or teaching roles. For example, a psychologist may become more knowledgeable about differential medical diagnoses or a pediatrician may learn to obtain family history and include other family members in treatment like a social worker. The disadvantage of this model is that it can be hard for team members to learn from one another while still maintaining their unique professional and personal contributions. It is also very time consuming.

-The fourth model is the **SYSTEMS ORIENTED APPROACH**. This model involves the efforts of multiple people in multiple settings. It deals with planning interventions at several different levels and involves multiple professionals. This can be accomplished through a task force made up of multiple professionals from different disciplines. An example of this type of collaboration would be a committee of different professionals working towards creating a new hospital program where children's emotional needs would be given just as much weight as their physical status. The disadvantage of this model is the degree of difficulty in implementing it. There are already many different system-related problems at the different levels of this model, and it can be very overwhelming to try to coordinate efforts.

1. Which type of collaborative model would you find most useful in your practice? (refer to descriptions above)

- ☐ Independent functions model
- ☐ Indirect consultation model
- ☐ Collaborative team model
- ☐ Systems approach

Other (please specify)

2. Which type of collaborative model would be most practical at your clinic and most easily implemented? (refer to descriptions above)

- ☐ Independent functions model
- ☐ Indirect consultation model
- ☐ Collaborative team model
- ☐ Systems approach

Other (please specify)

3. What do you see as the most prominent barriers to collaborative care at your practice? (check all that apply)

- ☐ Financial (reimbursement issues with managed care)
- ☐ Too time consuming
- ☐ Proximity (e.g. distance to mental health clinic)
- ☐ Lack of knowledge regarding available mental health services

Other (please specify)

4. How knowledgeable are you regarding recent healthcare reforms (e.g. Affordable Care Act, health homes, etc)?

- ☐ Not at all
- ☐ Somewhat
- ☐ Very Knowledgeable
- ☐ Not sure

5. How do you think these changes to health care will influence how/if you collaborate with mental health professionals?

Appendix B

A Study on the Collaborative Role of Psychologists in Rural Primary Care Settings

My name is Kimberly Russo, and I am a doctoral student in clinical psychology at Antioch University New England. I am conducting my dissertation research to learn more about the characteristics of collaborative relationships between primary care physicians and mental health professionals. I am asking you to participate because you are a primary care physician working at a healthcare facility within the LRGHealthcare catchment area, and at least some of your patients are children. Completing the survey will take approximately **10 minutes**.

The survey will ask questions related to your current attitudes regarding collaboration. It will also explore what styles of collaboration would be most useful and effective at your medical clinic. The results of this study may help to improve future collaborative relationships between mental health professionals and medical doctors in rural areas.

The survey can be completed at your clinic, and I have provided a self-addressed, stamped return envelope for the return of the survey and the signed consent form. I will be available through e-mail to answer any questions that you may have during the process at krusso611@hotmail.com. Thank you very much for your time, I know that your time is valuable and I appreciate your participation.