Embedding a Social Work–Led Behavioral Health Program in a Primary Care System: A 2012-2018 Case Study

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ABSTRACT

Introduction: The focus of this case study was the implementation of a fully integrated system of care that brought mental health into a federally qualified health center's primary care activities.

Objective: The Mississippi Integrated Health and Disaster Program aimed to increase the federally qualified health center's capacity for providing mental health services and in so doing increase patients' access to mental and behavioral health services in primary care. Included are the historical origins of the program and the context in which these clinics operate, as well as successful processes that reduced barriers between medical providers and social workers and ultimately resulted in improved patient outcomes.

Results: Data indicated that the Mississippi Integrated Health and Disaster Program's integrated health model significantly improved depression, anxiety, and self-care among chronic care patients.

Conclusion: This integrated health approach transformed the treatment culture of patient care in primary care clinics and improved patient outcomes. This study highlights the benefits possible when behavioral health provided by social workers is fully integrated into primary care. This case study illustrates the importance of developing a care model that meets the patient populations' specific and varied needs while concurrently establishing an integrated service delivery culture within local clinics and within the organization's administrative structures.

KEY WORDS: behavioral health integration, care coordination and social work

In the Spring of 2010, the explosion of the Deepwater Horizon oil platform in the northern Gulf of Mexico led to the leakage of 4 million barrels of oil.[1] This event, one of the worst oil spills in the history of the United States, endangered wildlife and crippled industries that depended on the Gulf for their income. While the explosion brought disaster, the medical settlement that followed opened the door to an opportunity. The financial resources allocated to the Gulf Region Health Outreach Program by the court decision allowed for the creation of a university-based applied social work intervention program in Mississippi with a single focus—the integration of mental health into primary care. The program's core functioning principle was to address the psychosocial dimensions of health with an emphasis on the role that behavioral health plays in individual well-being. The service model targeted interventions that would support the needs of the most vulnerable residents and produce lasting system change within primary care to achieve community health improvement that would have the widest impact.

Fortunately, funding made available through 2 simultaneous events, the DWH oil spill settlement in 2012 and the implementation of the Affordable Care Act's mandates, supported the development of the project both financially and politically. During this same period, the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration

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(HRSA) jointly funded the Substance Abuse and Mental Health Services Administration-Health Resources and Services Administration Center for Integrated Health Studies to advance the idea of integrated health, recognizing that fragmentation and separation of physical health and mental health services resulted in an ineffective, inefficient health care system.[2] These factors combined created an environment that supported the launch of integrated health initiatives along the northern Gulf Coast. This article describes how a school of social work responded to the behavioral health demands of a community following the DWH oil spill by developing an integrated health program that focused on community need.

Population Challenges

One could argue that location amplified the impact of the oil spill. At the time of the oil spill, Mississippi had the lowest median income in the United States.[3,4] In addition, residents of southern states suffer from a greater prevalence of both chronic[5] and mental health issues than do other parts of the nation.[6,7] The existence of these population risk factors and other problems attributable to social determinants of health, such as low income, low socioeconomic status, and lack of access to health care providers and resources,[3,8,9] predisposed residents to disaster-related mental health problems and significantly impeded resiliency and recovery efforts.[3,10] In one study of South Mississippians who were affected by the oil spill, individuals categorized as living below the poverty level had significantly more symptoms of depression, anxiety, stress, and posttraumatic stress than those who were living above the poverty line.[3] Even when communities were not at risk, mental and physical health problems often were manifested in the wake of disasters.[3,11,12] More worrisome was the fact that mental health impacts were persistent and individuals were slow to recover.[13]

There is much evidence supporting a connection between poor mental health status and the presence of chronic physical health conditions.[6,7,12,14-18] Specifically, depression and anxiety have been linked to obesity,[16] diabetes, cancer, cardiovascular diseases,[12] arthritis, and asthma.[6,7,14,15] In fact, Drescher et al[3] found that physical health was a significant predictor of the symptoms of depression, anxiety, stress, and posttraumatic stress in impoverished individuals. This research supports other data indicating that increased severity of one type of health issue goes hand in hand with the other,[6,15] and improvements in mental health reduced physical chronic disease symptom severity.[15]

The state of Mississippi consistently ranks at or near the bottom of all states in poverty,[19] health, education, and mental health.[20] Mental Health America, an organization that ranks states from 1 (best) to 51 (worst) on the basis of the prevalence of mental health issues and resources, ranked Mississippi 49th in access to care, 19th in prevalence of mental illness, and 44th overall in 2014.[21] In addition, the National Alliance on Mental Illness, which analyzes states' mental health programs at 3-year intervals and provides letter grades according to their findings, awarded Mississippi a D in 2006 and an F in 2009.[22,23] In Mississippi, where mental health issues often go untreated, 60.5% of adults with a mental illness are not receiving treatment as compared with 56.5% nationwide.[24] Nationally, approximately 25% of people who visit primary care clinics are depressed, but only 30% of them are diagnosed.[14,25] The lack of treatment can be a result of stigma,[26] access, or both.[22,27] Therefore, primary care clinics are excellent locations for integrated care interventions,[18] and it is imperative that these clinics contain interdisciplinary professionals who can assist patients with a wide spectrum of needs.[28,29] In addition, it has been recommended that individuals from various fields, such as public health, mental health,[27] and primary care,[18] cooperate in order to show that the disciplines can work collaboratively to improve patient health outcomes.[30,31]

Methods

History of Mississippi Integrated Health and Disaster Program

The opportunity provided by the Deepwater Horizon medical settlement coupled with community need led to the creation of the Mississippi Integrated Health and Disaster Program (MIHDP). The MIHDP, a project of the School of Social Work at the University of Southern Mississippi, partnered with a large tri-county federally qualified health center (FQHC) to design and implement a fully integrated system of care. The FQHC partner operates 12 full-time clinic sites, employs approximately 30 medical providers, and serves 33 000 unique patients per year. The primary goal of the collaboration was to increase capacity and improve access to mental and behavioral health services along the Mississippi Gulf Coast. In addition to creating valuable research opportunities, the program has been able to train graduate social work, public health, and dietitian interns in this emerging model of improving population health. Study protocols performed by the MIHDP were reviewed and approved by both the university's institutional review board and the FQHC.

Building a new system of care at individual clinic sites began with the physical introduction of social workers into the primary care "clinic" workspaces. Access to the clinic environment was obtained through an agreement between the FQHC and the principal investigator for the MIHDP. At the outset, the MIHDP expected medical providers to identify patients with mental health diagnosis and directly refer those individuals to the social worker for care. Since this strategy closely matched the model that had been employed by the FQHC when it had a single mental health provider at 1 site, it was logical to think that simply introducing additional providers would result in the natural growth of mental health services. That was not the case. After 3 months of service, social work staff barely averaged seeing 1 patient per day. Services were then adjusted to provide support to patients identified as having adverse medical outcomes to increase patient contact and build the professional relationships between social worker and medical provider. Mental health services were shifted to focus on mood disorders (ie, depression, anxiety, etc) that could successfully be treated in primary care. This decision began a change of focus that eventually led to the formation of the Chronic Condition Support Program (CCSP). The CCSP required social work staff to utilize a patient registry and actively pursue patient contact by consulting with the treating primary care provider to identify patients who would benefit from behavioral health services. These consultations resulted in a direct handoff of the patient from medical professional to social worker.

Often, the MIHDP staff employed both techniques to engage patients as the handoff process helped more quickly build rapport between the social worker and the patient. The initial patient population selected for this program was diabetic patients with an A_{1C} of 9% or greater and a history of poor glycemic control. The A_{1C} test measures a person's 3-month average blood glucose level and is commonly used to diagnose and monitor type 2 diabetes.[32] Patients with A_{1C} values greater than 6.5% are classified as diabetic,[32] and the MIHDP considers values greater than 9% to be indicative of uncontrolled diabetes.

The Chronic Condition Support Program

To ensure immediate access to identified patients at the end of a medical appointment, the CCSP embedded social workers in modified examination rooms on patient care halls. The assessment phase of treatment equally considered the impact of mood disorders as well as environmental, social, behavioral, and financial factors on patients' health (Figure 1). A patient, social worker, and medical provider collaboration resulted in the development of care plans that focused on individual needs and set goals that addressed barriers to achieving optimal wellness and not just mental health concerns. Interventions included education to improve health literacy, linkage to resources to overcome economic and physical barriers, problem-solving to encourage healthy lifestyle changes, motivational interviewing, and treatment of existing mood disorders.

Outcome Measured	Assessment Tool Used
Mental Health	Patient Health Questionnaire 9-item (PHQ-9)
	Generalized Anxiety Disorder 7-item (GAD-7)
	PTSD Checklist (PCL)
	Current Stressors
	Stressful Life Events
Physical Health	Hypertension Self-Care Activity Level Effects (H-Scale)
	Summary of Diabetes Self-Care Activities (SDSCA)
	A1C
	Blood pressure
	Height and weight
Substance Abuse	Drug Abuse Screening Test (DAST)
	Alcohol Use Disorders Identification Test (AUDIT)
	CAGE Substance Abuse Screening Tool
Overall Health & Well-being	Duke Health Profile
	(Physical Health, Mental Health, Social Health, General Health, Perceived Health, Self-Esteem, Anxiety, Depression, Anxiety-Depression, Pain, Disability)

FIGURE 1 Chronic Condition Support Program: Assessment Tools Utilized by Outcome Measured

CCSP development

The CCSP social work staff worked from a flexible curriculum and supportive protocols developed in collaboration with medical providers. The 9-session curriculum contained a series of nonlinear, stand-alone modules that included a needs assessment, behavioral health interventions, and patient handouts addressing diet, exercise, disease-specific symptoms, and treatments. Patients are not required to complete all modules as treatment plans are designed to address patient specific need. After an initial 90-day pilot phase using a single social worker/medical provider pair, all social work staff received training in the model and the program expanded into 5 clinics in 2 coastal counties. While the pilot program ran smoothly, the expansion into other locations revealed some unanticipated challenges. Working as "visitors" in the host agency required both cultural and structural changes to the primary care system.

Initially, the program functioned from the "bottom-up" by focusing on building clinic operations. This required the social work staff not only to gain extensive knowledge about chronic health conditions but they were also asked to adjust how they functioned. Primarily, the staff had to develop self-advocacy and marketing skills. In many clinics, space is allocated to support the provision of medical care, with other services placed outside of the main patient flow. This arrangement allows primary care physicians to move between examination rooms quickly and increases productivity. However, locating social work staff outside of this flow inhibits patient access and discourages collaboration. The CCSP staff had to learn to advocate for space by explaining how the service could benefit patients and primary care providers, requiring social work clinicians to market their abilities and the services they could offer. Every MIHDP staff member had to be well versed in educating providers on the roles of social work, the benefits of an ecological perspective, and how the model could support the provider with addressing the social determinants of health that negatively impacted patient compliance and affected outcomes. Moreover, each clinic site had its own "personality" that complicated the integration process and required the social workers to adapt their practice, work flow, and expectations.

Since the social work staff joined an existing operation, it was up to them to adjust their practice model to fit clinic flow. Many of the traditional models of social work practice call for 60-minute appointments, with interventions that focus on mental health concerns. For the CCSP model to be successful, office visits were set at 30 minutes to support patient volume and pace of the provider. Within the FQHC, medical providers see patients every 20 minutes. Hour appointment slots limited access to the social work clinicians and decreased opportunities for team building and in-between visit consultations.

The combined emphasis on behavioral health and barriers to medical treatment plan adherence required the MIHDP staff to speak differently both to providers and to patients. Not only did the social workers have to learn medical terminology, they had to adapt interventions to support behavioral changes that would have the greatest impact on overall health. The clinic staff had to incorporate the link between physical and emotional health into the treatment planning process and help the patient understand how one influences the other. Following the model meant every session with a patient had to include discussions on all aspects of health.
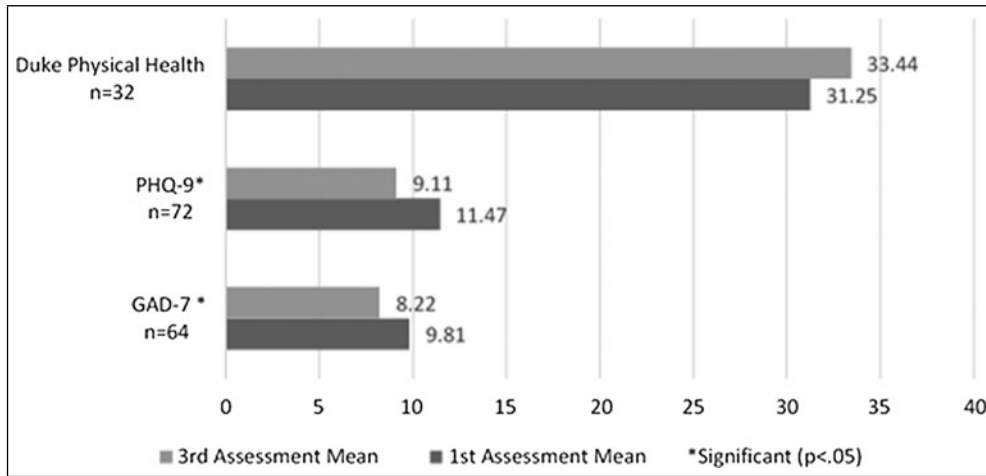
Results

The MIHDP program typically employs 10 to 12 licensed social workers and maintains approximately 13 MSW interns per semester. Between 2013 and 2016, the social workers and interns providing services under the MIHDP recorded more than 3900 direct handoffs from medical staff to social worker, approximately 1400 appointments, and nearly 2700 chronic care sessions (915 unique patients), which contributed to more than 12 600 total face-to-face encounters. One year following the full implementation of the CCSP, patient contacts by social workers rose by 300%, nearly half of which were for chronic care support.

Data collection and assessments

The electronic health record utilized by the FQHC was primarily designed as a tool to support primary care services. While the system was adequate for medical providers, it lacked the assessment tools utilized by clinical social workers in the CCSP program. To solve this problem, the MIHDP developed a secure online platform that could be customized to meet the needs of mental health providers. Since its inception, the Dagger Online Assessment Tool (Dagger) has evolved into a program that assists not only with scoring assessments but also with tracking patient outcomes.

Dagger allowed the CCSP clinicians a rapid way to complete and score a multidimensional assessment. This information is accessed by the clinician during subsequent visits to determine whether the patient improved in both mental and medical health measures. Since the CCSP treatment protocol requires the social worker to assess patients at fixed intervals throughout care, the data are used by the clinician

FIGURE 2 Selected Patient Assessment Scores: Results of Paired Samples *t* Tests[a]
Abbreviations: GAD-7, Generalized Anxiety Disorder 7-item; PHQ-9, Patient Health Questionnaire 9-item.
[a]Duke Physical Health scores can range from 0 to 100, with higher scores indicating better physical health.[33] PHQ-9 and GAD-7 scores can range from 0 to 27 and 0 to 21, respectively, with lower scores indicating better mental health. The following score ranges indicate levels of mental distress: PHQ-9: ≤4 no depression, 5 to 9 mild, 10 to 14 moderate, 15 to 19 moderately severe, and 20 to 27 severe[34]; GAD-7: 5 to 9 mild anxiety, 10 to 14 moderate, and 15 to 21 severe.[35]

to guide treatment planning and advise the medical provider.

Clinical data collection using Dagger began in May of 2014, and each year the program has seen a rise in the number of unique encounters and total contacts. Between 2015 and 2016, there was an 11% increase in unduplicated patients.

Statistical analyses of Dagger data using SPSS and SAS for CCSP patients who completed at least 3 sessions revealed statistically significant improvements ($P < .05$) in patient health scores in several key outcomes, such as anxiety, depression, and diabetic

self-care activities (Figures 2 and 3). Analysis of scores from the DUKE Health Profile revealed improvements in physical health, although not statistically significant ($P > .05$). In terms of general demographic makeup, most CCSP patients were middle-aged ($M = 46.71$ years, SD = 16.037) and female (63.2%), lived with their families (61.7%), and had a high school diploma or equivalent as the highest level of education (35.7%). About an equal number were single (37.2%) as were married (31.4%), and there were slightly more white patients (48.9%) than black/African American patients (40.9%).
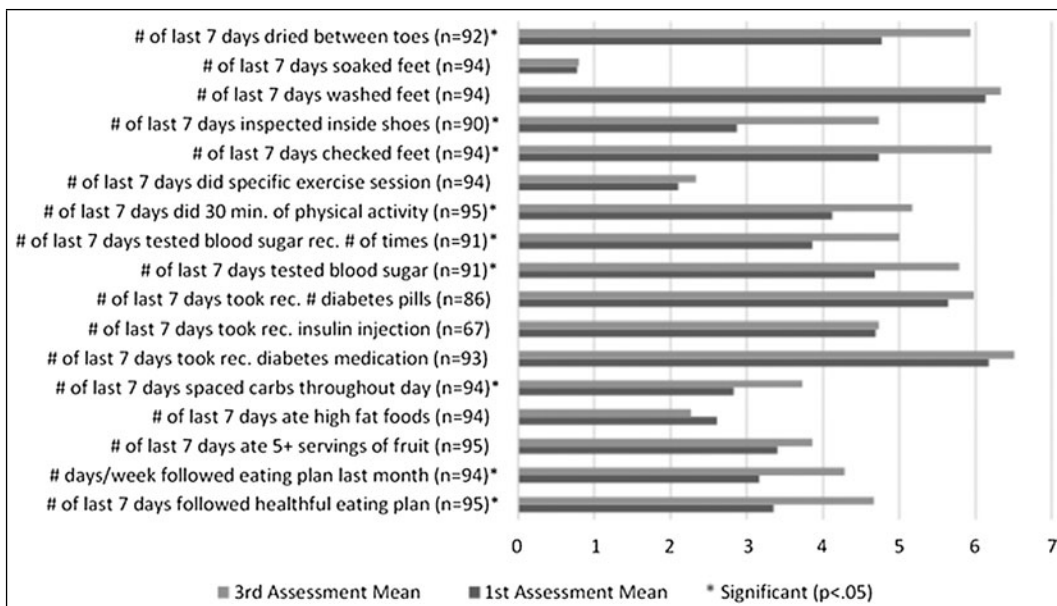
FIGURE 3 Summary of Diabetes Self-Care Activities: Results of Paired Samples *t* Tests

Discussion

The initial goal of the MIHDP was to increase access to mental health services and improve the health of Mississippi coast residents. At inception, the program focused on providing mental health services to patients referred in house by their primary care provider. While the need for the service existed, the culture of the clinic and the needs of the population did not support program development. The solution, while not immediately obvious, was simple; successful integration could only occur if services were tailored to meet the needs of the population, fit the workflow of a primary care clinic, and support both physical and mental health.

Embedding social workers in a shared physical space encouraged collaboration between specialties (behavioral and medical) and created a health care team that included the patient and encouraged providers to consult in real time (Figure 4).

Increasing collaboration naturally led to an understanding by all provider types that they had to adjust their views of patient care. Medical providers began to reach out to social workers to support patients with psychosocial needs, and social workers began to understand that focusing solely on mental health did not fully support the patient. While the mental health assessments were useful in addressing one aspect of patient need, the expanded focus created a care model that addressed a wider variety of need.

The ecological model of social work practice is critical to addressing the social determinants of health that impede patient improvement. Specific components of the CCSP were designed to support patients with limited resources and significant barriers to gain knowledge and build the skills needed to become better self-managers of their illnesses, all of which are necessary to improve outcomes. Primarily, the CCSP utilized culturally sensitive educational strategies to increase health literacy and self-efficacy, allowing
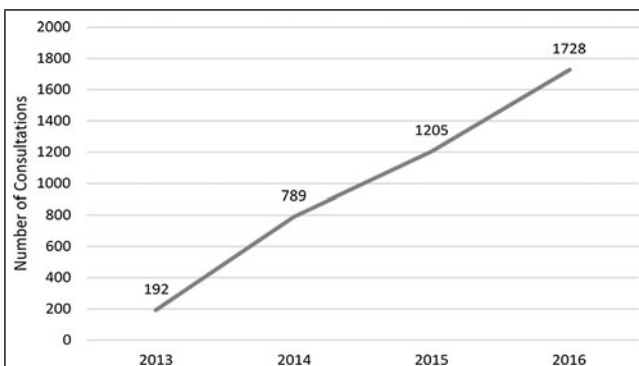
Implications for Policy & Practice

- The success of the Mississippi Integrated Health and Disaster program has resulted in long-lasting system change in a large FQHC that serves more than 30 000 patients per year. The MIHDP has also brought about changes in the landscape of social work training and practice for the Mississippi coast. The MIHDP has trained more than 100 social workers in the delivery of integrated care. These students can bring a unique perspective to any environment in which they practice because they understand the importance of both a holistic health perspective and an interprofessional collaboration.

- The MIHDP illustrates that a social work–driven behavioral health model can successfully enhance patient wellness in a primary care system. Social work's ecological framework supports addressing the social determinants of health that serve as barriers to patient adherence and negatively impact health outcomes. This case study has shown that a marriage between social work and public health can and does improve patient outcomes for individuals with chronic health conditions. The success of this program can be used to guide federal and state agencies as they decide how to combat the growing health crisis in the United States. Policies and payment options that support social work–driven integrated models of care will enhance patient health by supporting the development of a more holistic view of population health.

- All providers must understand the need to equally address behavioral and physical health in an integrated care model. Initially viewed as "visitors" within the FQHC, MIHDP's success has created an integrated model that has eliminated that separation and forever changed the way health is viewed and services are delivered within primary care on the Mississippi Gulf Coast, resulting in improved outcomes for the most vulnerable populations. Furthermore, these changes have shifted operations in the clinic, creating a culture that supports the continuation of an integrated service model in the absence of external funding.

FIGURE 4 Number of Consultations With Primary Care Providers by Year, 2013-2016

patients with significant psychosocial barriers to take control of their health.

The MIHDP program began with a disaster, with no access to predisaster baseline data for the Mississippi Gulf Coast to compare to the postdisaster data collected. On the one hand, this poses a limitation because there is no definitive method of ascertaining what impact services have had on the population postdisaster. Conversely, it presents a unique opportunity to construct a baseline data set that can be built upon continuously by future research and referenced when needed. The data collected by MIHDP can provide valuable insight into how individuals and communities are impacted by both natural and

human-made disasters, particularly for those with chronic health conditions. Results obtained through the analysis of such data can enable practitioners and clinicians to provide more tailored treatment to affected populations[3] following future disasters.

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