Can Mental Health Integration in a Primary Care Setting Improve Quality and Lower Costs? A Case Study

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ABSTRACT

OBJECTIVE: To describe the successful implementation of an evidence-based, integrated quality improvement mental health program in a primary care setting.

SUMMARY: Intermountain Healthcare (IHC) has aligned resources around a conceptual framework that emphasizes clinic and community accountability, family and consumer health focused on recovery rather than disease, and enhanced decision making through partnerships and automation. The mental health integration system includes an integrated team led foremost by the patient and family with vital defined roles for primary care providers, care managers, psychiatrists, advanced practice registered nurses, support staff, and the National Alliance for the Mentally Ill. Pharmacists have assumed training functions on the team and have the potential to play more vital roles.

CONCLUSION: The IHC experience demonstrates that mental health services can be effectively integrated into everyday practice in a primary care setting. Clinical and financial burden can be decreased for the health care team, patients, and family.

KEYWORDS: Depression, Primary care, Integrated health care systems, Quality improvement

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The responsibility for providing mental health care typically falls to primary care and other medical providers. The last decade saw a significant increase in the proportion of people with serious mental illness and substance abuse disorders who reported receiving care from primary care providers and hospital emergency departments.^{1,2} Despite the availability of evidence-based treatment for mental health disorders, many patients and their families do not receive effective treatment in real-world settings.³⁻⁶ Current models of mental health care delivery are inadequate and inefficient, limiting evidence diffusion and leading to provider and consumer exhaustion, significant gaps in care, and poor outcomes.⁷ Consequently, patients and family are often left stranded to navigate their way through a fragmented, barrier-ridden health care system.

The case study presented here describes the successful implementation of an integrated model of care developed at Intermountain Health Care (IHC) in Salt Lake City, Utah. As a nonprofit organization, IHC combines the financial, administrative, and delivery aspects of health care into one integrated network committed to providing clinical excellence, quality, and innovation. In 1999, a key group of IHC leaders became increasingly concerned that primary care medical resources were not being used effectively to treat patients with depression and other mental health conditions. These leaders were influential in establishing the Mental Health Integration (MHI) quality improvement program to ease the burden of physicians in managing these conditions and to build a business case for integration. Consumers, providers, hospital and physician administrators, community partners, and research staff worked together to bring about this integration of mental health care services. Early results demonstrated that, as part of routine care at a neutral cost, collaborative primary and mental health care led to improved functional status in patients and improved satisfaction and confidence among physicians in managing mental health problems.⁸

The MHI leadership team aligned resources around a quality improvement conceptual framework where clinical decision making was enhanced and the impact was measured. The question that still remains to be answered is, "What is the value added?" The hope is to increase family and consumer demand to justify the theorized added value.

Initial Steps

Initially, we oriented the primary care culture with sound definitions to support integrated mental health care. MHI is a comprehensive approach to promoting the health of individuals, families, and communities, based on communication and coordination of evidence-based primary care and mental health services.

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The World Health Organization defines “health” as “a complete state of physical and mental well-being.”⁹ The Surgeon General defines “mental health” as “a state of successful performance of mental and physical function resulting in productive activities, fulfilling relationships with others and the ability to adapt and cope with adversity.”¹⁰ MHI is mental health care that is integrated into everyday health care practice. The integration of mental health into primary and medical care simply means treating mental health as any other health condition from identification to recovery. This integration is one example of quality health care delivery redesign that is team-based, outcomes-oriented, and follows a standardized quality process that facilitates communication and coordination according to consumer and family preferences and sound economics.

At IHC, we have well-established chronic care processes for diabetes, asthma, and other chronic conditions (Figure 1). Our clinical work teams for diabetes estimated that approximately two thirds of the community visiting a primary care clinic can be treated for chronic disease by the physician and medical assistant with the support of disease-specific care process treatment tools. One sixth of this population may require some additional follow-up, such as a session with a diabetes educator or a care manager, to support adherence. The remaining sixth may require the primary care provider to seek further specialty consultation, such as with an endocrinologist, due to disease complexity or comorbidity factors that affect compliance. With this conceptual framework in place, IHC leaders built an MHI infrastructure across all of the chronic diseases to support the stratification of patient and family health needs to match an appropriate level of collaborative care (Figure 2).

This “MHI treatment cascade” helps sort the level of severity of the patient/family into a risk category. As patients and their family have more complex comorbidities, the patient is placed in a higher risk or higher level-of-need category. As risk category increases, additional mental health or team specialty services may be required for the patient and family to reach the identified health outcomes. We have also built a Mental Health Registry that will help link diagnosis and clinical measures to the economic resources needed to achieve selected outcomes.

During a typical day in a primary care physician’s office, the provider may be faced with multiple patients and families, all with varying needs. During a 7-minute visit, the family can present up to 10 different health problems, many of which may have a mental health component or involve an undiagnosed mental health condition. How does the primary care provider begin to assess and organize this complex, emotionally burdened clinical presentation that does not fit into the time-coded office visit? We theorized that implementation of MHI would improve the providers’ ability to identify and confidently treat mental health conditions, and improve our detection rates and our providers’ practice satisfaction. We also hoped to improve the functional status of patients (and their satisfaction with care) as well as minimize

FIGURE 1 Chronic Disease Services

Total Population With Chronic Disease (e.g., Diabetes)

- RCT Self-Management/Engagement Protocols
- Quality and Efficiency Measures: Cost Model

2/3	1/6	1/6
Medical Assistant	Generalist Care Manager and Mental Health Clinician	Specialist Care Manager/MH/Other Support Staff
Primary Care Physician General Internist or Pediatrician Family Practitioner		Adult or Peds Medical Specialist*

* Psychiatrist/APRN for mental health.

The physician, nurse practitioner, and medical assistant have the tools available to manage chronic disease in two thirds of the population coming into any primary care clinic for care. Among the other third of the population presenting, one sixth will require specific follow-up and one sixth will require referral for specialist care.

APRN = advanced practice registered nurse; MH = mental health;

RCT = randomized controlled trial.

the cost burden and barriers associated with care access. Our solution was to build an MHI quality improvement program.

Building the Program

The MHI program was tested in Salt Lake City at an urban primary care clinic that houses a team of well-respected pediatricians and internists. This group of IHC physicians had already initiated collaborative care for conditions such as diabetes and asthma, and they encouraged IHC leadership to redesign the clinic workflow to integrate mental health care as part of everyday practice.

An MHI leadership team was established at each regional site to design, implement, and evaluate the MHI model, using standard quality improvement principles and a tested economic pro forma. Team membership included key stakeholders, such as lead physicians, mental health practitioners, receptionists, clinic administrators, a quality researcher, consumers, and onsite nursing care managers. The MHI accountability was realigned to the clinic manager, who was responsible for recruiting and hiring the MHI team and designing an MHI operational workflow that would support the clinic primary care providers and support staff.

At the clinic site, the roles of primary care providers, consumers and families, mental health providers, and care managers were redesigned and reorganized into a consultative and collaborative treatment team model to improve care for mental health conditions in the primary care setting. Our development, implementation, and support of this team (Figure 3) offers a strong “nonfinancial” incentive for the provider to treat mental health as part of everyday care. The provision of incentives, such as technical assistance, member incentives, provider profiling, education, and clinician recognition, has become an integral part

FIGURE 2 IHC Mental Health Integration Supported by the Robert Wood Johnson Foundation

of many quality programs. The adjunct inclusion of nonfinancial incentives, because they translate economically for providers, will increase the effects demonstrated by financial incentives alone.¹¹

To achieve these changes, members of the MHI team participate with primary care providers and their support staff in ongoing standardized MHI “Teams and Tools” training. This includes the use of an MHI assessment packet and the electronic medical record (EMR) for documentation and communication with each other regarding treatment progress, patient response, and/or recommended changes. The MHI training and role “rethinking” process focus on team collaboration, family-centered care, and health recovery. Families are acknowledged for providing a significant proportion of support for the self-management of a chronic disease and are valued as a sustainable resource to the patient for promoting ongoing adherence.^{12,13} Therefore, educating the practitioner and support staff about engaging the patient and family in a health partnership is a critical part of the self-management component of the IHC MHI clinical model.

The Clinical Model: Team Roles

This integrated team is activated by patient and family preference (Figure 4), which is communicated to the primary care provider and support staff (including the receptionists) through their established health care relationships. The care manager has a role in the coordination of care and follows up with patients while the psychiatrists and advanced practice registered nurses (APRNs) contribute to the specialty care. In addition, pharmacists can play a key role in this process, and we should strive to identify these extended roles. Finally, community groups, such as the National Alliance for the Mentally Ill (NAMI), are important resources for the patients and family members. It should be emphasized that everyone has a valued and instrumental role on this team.

Patients and family members are encouraged to provide an accurate report of the patient’s history and current health functioning. In the program at IHC, patients complete the MHI assessment packet, which is provided in paper form and online, and give completed forms to the providers. This helps providers

understand the patients' treatment preferences and adherence risks as well as the preferences of their family and support system, which helps them to better manage the patients' chronic illness.

The primary care provider uses the MHI packet to screen, establish diagnoses, and communicate treatment options to the patient and family. This tool facilitates a crucial function of the primary care provider's role, which is to prepare the patient and family for what to expect from the MHI process. Providers explain the roles of various players on this team and the rationale for working with the different individuals based on the family's self-reported needs in the MHI assessment packet.

The care manager is responsible for education and follow-up and for communicating with the MHI team regarding the family's adherence and risk preferences. Care managers are specifically trained to help engage families that may be either isolated from or have exhausted their natural support systems. They provide routine follow-up and assist families with identifying the resources available to them. The managers also document mental health packet results and use the EMR information systems to communicate and follow outcome measures. Our care managers are trained to support not only depression but also all of the most common chronic diseases seen in our population.

The family is probably the least utilized resource in our health care system. The family is often left to navigate through the reimbursement and access web of our fragmented health system. Family relationships can also have a tremendous impact on the patient's health condition and, based on their preferences and values, influence adherence rates. We have attempted to educate our teams to assess the family's values and relational support and then match these with the level of MHI resources that are available. The ultimate goal is to help guide the family to achieve realistic health management goals by building or reinforcing the relational support they will need to improve and manage the patient's health.

The psychiatrist and APRNs on our team provide consultation and are available either by phone or on site. They also provide ongoing training to other health care team members in assessing complex comorbid diagnoses and pharmacotherapy. Mental health specialists, such as psychologists, social workers, and nurses, can provide on-site, brief, solution-focused cognitive-behavioral psychotherapy and offer support for follow-up care when needed. Families also have the option of using their employee assistance plan or paneled therapist, and this referral link is facilitated and tracked by the care manager.

One question that remains is whether there is a role for pharmacists on our team. As mentioned previously, pharmacists may fulfill the role of the care manager. In some MHI clinics, pharmacists are at the clinic and are utilized as training providers. Due to their expertise in medications and psychopharmacology, clinical pharmacists are excellent resources for the patients, providers, and family members. Often, pharmacists work closely

FIGURE 3 The Clinical Model for Integrated Mental Health Care

APRN=advanced practice registered nurse; CHADD=Children and Adults with Attention-Deficit/Hyperactivity Disorder; EMR=electronic medical record; MHI=mental health integration; MSW=master of social work; NAMI=National Alliance for Mental Illness.

FIGURE 4 The Clinical Model: Team Roles in Integrated Mental Health Care

APRN=advanced practice registered nurse; EMR=electronic medical record; MHI=mental health integration; MSW=master of social work; NAMI=National Alliance for Mental Illness.

with other members of the multidisciplinary team to offer recommendations and guidance about the safety and appropriateness of medicines. Additionally, they can advise providers about the best way to administer medication and monitor for side effects. They develop treatment plans detailing the objectives of drug therapy, produce monitoring requirements, and contribute to collaborative-based care plans. Pharmacists can also answer any questions or concerns that patients or their caregivers may have about either current or future treatment options, conduct interviews to make assessments about medication effects, and make

FIGURE 5 Rate of Detection for Adult Patients in Primary Care Setting Between Integrated and Nonintegrated Clinics

MHI=mental health integration.

FIGURE 6 Total Claims Costs for Adult Patients in Primary Care Setting Between Integrated and Nonintegrated Clinics

MHI=mental health integration.

recommendations about appropriate drug choices, especially when drug formularies or genetic research offer limited choices.^{14,15}

The MHI team has also enlisted the support of NAMI, a consumer advocacy community resource, in order to enhance the education and peer mentoring support needed by the families at each clinic site. The Alliance is not only a community resource but also a partner on our MHI team. NAMI completed several focus group reviews of the MHI assessment packet and determined that they were "consumer friendly" with minor changes to the initial introductory page. Our relationship with NAMI in the community

may enable families to be linked to one of their trained providers and support advocacy groups. The programs are free of charge and may be extremely valuable to families that cannot afford mental health specialists.

Mental Health Integration Tools

Our Web site, www.ihc.com/clinicalprograms, provides a primary guide to MHI for our primary care providers. The Web site provides instruction on how to use the MHI assessment packet and how to develop this integrative program. It allows the providers to assemble a patient's risk factor and measurements and determine the most appropriate level of care for that patient and family. Depending on this risk-sorting process, appropriate steps may be suggested, such as primary care physician management, involving a care manager, or collaborative referral to a mental health specialist.

Once the MHI packets are used to identify potential cases, care can be individualized for each family. The packets are available online and can be used by patients or their family members to assess the patient's symptoms. This tool will generate a group of scores that can be printed out and brought to the primary care provider, who will interpret and review the scores with the family. This reinforces the patient's and family's role as active members of the team.

In addition, our information system, the EMR, is used to communicate between the members of the team. The message log, a tool in the EMR, is used to transmit messages between providers. All communication is electronic, and, in reality, these tools are being utilized regularly. Physicians and practices have adopted these MHI tools, despite their size and complexity, into their practices because their use results in an organized plan for communicating the diagnosis and treatment options to the family and links them directly to an appropriate member of the MHI team.

The Mental Health Registry is another tool that has recently been designed. Its structure is similar to IHC's diabetes and asthma registries, but it has the additional capacity to link clinical and cost information and measure longitudinal impact. While we have started with depression in the Mental Health Registry, we have built in design capacity to build linked cohort registries for other mental health disorders, such as bipolar and anxiety disorders. One benefit of the registry is that we are able to track somatic complaints and associated illnesses that have resulted from those complaints and vice versa. Preliminary findings in the Depression Registry show that during the 2-year period of 2003-2004, there were 32,447 patients in the Depression Registry (29,226 adults and 3,221 children), with 18,708 of these patients (16,366 adults and 2,355 children) being insured by IHC health plans for whom all clinical and claims costs outcomes are available for the purpose of analytical studies.

We are also analyzing clinical and cost outcomes according to risk "sorting" stratification. The registry is useful in determining

the resource level needed for different levels of severity of these disorders as well as cost to families. Employer groups are especially interested in the cost aspect because they often provide benefits for the entire family. As mentioned before, depression and other mental health conditions affect not just the patient, but the entire family. The registry will provide invaluable information for employers to assess the value of improved depression care.

Initial Results

So how are our primary care physicians performing in the detection of depression? In a trend analysis, when compared with primary care clinics (similarly matched) without MHI intervention, the intervention group performed significantly better in detecting depression (Figure 5). Rate of detection for depression for adult patients, as measured by the proportion of patients per quarter diagnosed with depression (based on the *International Classification of Diseases, Ninth Revision* [ICD-9] depression codes), improved significantly in the test clinic, as compared with the control clinics, which consisted of 8 primary care outpatient clinics in the central urban region where the test clinic was located. In addition, the total claim costs were slightly better for the intervention group compared with the nonintervention group (Figure 6). The cost increased after the intervention, as expected, since the detection rate of depression increased. The number of pharmacy claims also increased as more patients were diagnosed, received a prescription, and actually filled the medication from the pharmacy (Figure 7). Total cost analysis was important to demonstrate to the health plans that the interventions actually neutralized or even reduced the cost burden.

The most critical components of our MHI system are clinic and community accountability, a family/consumer health focus on recovery, and the clinical and economic tools to enhance decision making and facilitate partnerships. The clinical model empowers providers to communicate with each other and develop relationships with patients and family members. The flexibility and automation capability of the information system and data registry has proven to be especially important in sustaining system and practice changes.

The overall goal of the MHI program was to reduce the burden for primary care physicians by developing tools and teams. The initial results—which showed that MHI improved clinical outcome, increased depression detection rates, and improved patient satisfaction but did not increase health care claims costs—were an encouraging start. Even though the results were preliminary, they were positive enough to obtain the support of IHC upper management to extend the MHI model to other primary care clinics within the IHC system. To date, MHI has been deployed in 8 clinics within the IHC system, and we have plans to deploy MHI in a total of 15 additional IHC primary care clinics. This economic model has enabled all of IHC's service delivery regions to establish an affordable business case in support of deploying MHI throughout their primary care services.

FIGURE 7 Depression Claims Costs for Adult Patients in Primary Care Setting Between Integrated and Nonintegrated Clinics

MHI=mental health integration.

The case study at IHC has demonstrated that MHI is possible and effective within a primary care setting and that clinical and financial burden can be decreased for the health care team, patients, and family.

DISCLOSURES

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