BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

INTERMOUNTAIN HEALTHCARE CASE STUDY

Organization Profile

Based in Salt Lake City, Utah, Intermountain Healthcare (IH) is a nonprofit integrated health care system with 23 hospitals (2,723 licensed beds) and more than 2,900 affiliated physicians, of whom 800 are employed with the medical group. The organization also has more than 145 ambulatory care practices and its own health plan with 500,000 members. Intermountain provides health care services to communities in the region of Utah and southeastern Idaho.

Project Summary

To improve the management of chronic disease as well as the co-existing mental health needs of patients and families being served, IH leaders defined a goal to establish mental health integration (MHI) within medical group clinics staffed by primary care providers (PCPs) (internal medicine and family practice physicians, pediatricians, and more recently, obstetricians and gynecologists). MHI is defined as a standardized clinical and operational team process that incorporates mental health into everyday primary care practice as an integral part of promoting wellness.

Program Goals and Measures of Success

Mental health disorders can be comorbid with other chronic diseases, such as diabetes. According to a recent study funded by the National Institute of Mental Health, patients with type 2 diabetes and coexisting major depression are more likely to experience life-threatening diabetes-related complications.

This can lead to poor outcomes for both the physical disease as well as the management of depression. Integrated treatment within a team environment better manages this complexity and may help improve overall health outcomes.

IH measures outcomes for diabetes and for MHI. The initial measurements for MHI were chosen to help determine whether it was better than usual care for patients with depression. Outcomes included: 1) medication continuation rates at 6 months, 2) patient satisfaction, 3) clinician satisfaction, 4) staff satisfaction, 5) operational expense and, 6) payer expense. Based on sustained, positive results, MHI is being adopted as "usual care" across Intermountain Medical Group (IMG) primary care practices. There are well-established national data sets for looking at diabetes outcomes (HEDIS, DOQ-IT, etc.) and IH tracks all of these measures. The "medication continuation rate at 6 months" is a HEDIS measure, and that is perhaps the most common item in current national "measurement sets" for depression treatment. The organization is in the process of developing a common set of value-based outcomes in MHI clinics compared to non-MHI clinics.

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The overall goals of MHI collaboration are to improve clinical decisions, help patients and families receive an array of needed services within the primary care context, and reduce the burden on PCPs by having them work together with their clinical team. Each team member collaborates and works to the fullest extent of his or her training and licensure.

An evaluation by the organization in 2009 aimed to understand the impact of the MHI program on quality (as measured by reduced inpatient admissions and emergency room visits) and cost (as measured by allowable charges to the health plan). In 2009, 69 primary care clinics were participating in the MHI program at some stage. Of these, 22 clinics were in a planning phase: they had access to the MHI tools and had considered a plan for program implementation. Thirty-five clinics were in an adoption phase: they had assigned MHI leaders, activated an implementation plan, hired additional team staff, completed MHI training, and were using the MHI tools. Twelve clinics were in a routine phase. Routine clinics have fully implemented their teams and tools. The process has become embedded in the routine flow of clinic delivery.

The study initially identified 18,587 adult patients with an initial diagnosis of depression between 2004 and 2006. This cohort was then restricted for 1) continuous 12 months prior and 12 months post-diagnosis enrollment in the IH health plan (SelectHealth), 2) continuous treatment in comparable routine stage MHI clinics vs non-MHI clinics (usual care), 3) no development of chronic conditions other than mental health post-diagnosis of depression, leaving 1,229 patients (797 in the MHI treatment group, and 432 in the usual care group). For the treatment group, 1.5% of the patients had congestive heart failure and cardiovascular disease, 7.9% had diabetes, 6.4% had asthma, and 2.6% had cancer. For the usual care group, 2.1% of the patients had congestive heart failure and cardiovascular disease, 9.3% had diabetes, 5.8% had asthma, and 2.8% had cancer. Across these conditions, the treatment group had 83.8% with depression only, 13.9% with depression plus 1 of these comorbidities, and 2.3% with depression with 2 or more of these comorbidities, whereas the usual care group had 82.5%, 15.2%, and 2.3%, respectively.

The study findings were published in a 2010 edition of the Journal of Healthcare Management. One of the findings included a lower utilization of emergency room services. Depressed patients treated in MHI clinics are 54% less likely to have emergency room visits than depressed patients treated in non-MHI clinics.

Findings on Patient Health Questionnaire (PHQ-9) Improvement and Patient Satisfaction

• Patient PHQ-9 improvement:

Patients treated at MHI clinics have significant improvement in PHQ-9 as described in the table below.

PHQ-9 Initial Severity	Decrease of >=5 points within 3 months (N=6,913)	Decrease of >=5 points within 6 months (N=1,400)
20-27 points	70.9%*	62.6%*
15-19 points	65.1%**	50.8%
6-14 points	48.7%*	38.8%

*Difference between significant improvement and no significant change is < 0.001

**Difference between significant improvement and no significant change is < 0.01

• Patient & Provider Satisfaction:

Patient satisfaction survey conducted before and after implementation of MHI (N=118 patients) showed significant improvement ($p<0.05$) for how patients perceived:

- The sensitivity of their physician to their emotional or mental health concern
- How well their physician explained things to them (about their emotional or mental health concern)
- The overall care they received for their emotional or mental health concerns.

Physician satisfaction survey conducted before and after implementation of MHI (N=36 physicians) showed significant improvement ($p<0.05$) for how:

- Their ability to work with family of patient with mental health need
- Their ability to work with noncompliant or "difficult to treat" patients
- Their ability to work with family of non-compliant of "difficult to treat" patients

And significant improvement ($p<0.001$) for how they perceived:

- Their ability to identify mental health need of patient
- Their ability to work with patient with mental health need

Whether they now had the:

- Resources and support to help meet the mental health need of their patient
- Potential for effective mental health integration in their clinic

The organization's key objective is continuous improvement and high-value patient care. To reach this objective, IH sets strategic goals around 6 dimensions of care: clinical excellence, service excellence, physician engagement, operational effectiveness, employee engagement, and community stewardship. Incorporating MHI into the management of chronic disease provides the opportunity for IH to utilize each of these dimensions.

Population Identification

Clinics strive to screen every patient for depression and patients with chronic medical conditions. A new "complexity" tool to identify higher-risk patients based on diagnoses and clinical parameters also will help target at-risk populations. Currently, IH utilizes depression, diabetes, and asthma datamarts within its electronic data warehouse.

In 2010, IH tracked 122,736 patients (adults and children) in its depression registry (for patients treated in either clinics or hospitals). Of these patients, 88,828 (72%) were treated in medical group clinics and 93% were adults (aged 18 years or older). Among the adults, 66% were female (average age of 46.6 years) and 44% were male (average age of 44.9 years). Among the 5,981 children, 49% were female (average age of 14.4 years) and 51% were male (average age of 13.4 years). In addition, by cross-referencing the depression registry with IH's other chronic conditions registries, it was found that of 88,828 patients with depression treated in medical group clinics, 11.4% had diabetes, 7.7% had asthma, 4.1% had cancer, and 2.0 % had congestive heart failure.

Furthermore, based on at least 1 visit to a medical group clinic in 2010, 24,582 patients were suffering from anxiety (64% female), 9,638 patients had attention-deficit hyperactivity disorder (ADHD) (37% female), and 1,704 patients suffered from substance abuse and alcohol dependency (40% female). All of these patients are eligible to receive care through the MHI model.

Since 2000, IH has identified and is tracking 320,381 patients with depression (94% adults, 64% female) in its depression registry. In 2000, there were only 44,992 patients in the depression registry. About 25,000 patients have been added every year since. Since 2008, about 120,000 patients are under active treatment for depression in either IH hospitals or clinics.

Population Registries

Chronic disease patient registries enable providers to manage patients with chronic illness in a proactive, organized fashion. They allow providers to follow all of their patients with chronic conditions, such as diabetes, asthma, heart failure, depression, etc., and track longitudinally their clinical outcomes, medications, required labs, and preventive services. Registries also permit health plans to identify, with greater precision, members with chronic conditions for whom the health plan needs to report HEDIS measures and offer disease management programs.

IH has built registries for both purposes. The depression and diabetes registries are population-based and include every patient who has been treated or diagnosed with either of these chronic conditions. Because of their longitudinal structure, Intermountain registries are used for both reporting and as a source of comprehensive data for research purposes. Currently, a single, comprehensive patient-centered registry and associated reporting tool oriented around a collection of many chronic conditions (diabetes, asthma, depression) is under development to meet providers' need to address the growing complexity of their patient population.

The Intervention

Studies show that an organized system of collaborative mental health care delivery can improve every phase of chronic care, including diagnosis, treatment, ongoing monitoring, and management. It promotes treatment adherence by reinforcing ongoing patient and family support. Further, Intermountain has seen higher satisfaction rates for providers, patients, and families. MHI eases the burden on PCPs and staff by giving them additional team support, tools, and skills to treat and manage patients and families affected with both chronic disease and mental health issues. The team has a number of common tools available and results are reported centrally, which encourages consistency of practice based upon evidence.

The MHI process

When a patient is seen at one of the participating MHI primary care sites, he or she receives care for medical concerns and a mental health assessment via a self-administered PHQ-2 depression screening questionnaire. If the screening is positive, a full PHQ-9 is completed. If the PHQ-9 suggests depression and the provider is concerned about the diagnosis, he or she may choose to administer the full MHI baseline packet. Patients with chronic disease who may also have comorbid mental health issues are encouraged by their PCP to complete the baseline evaluation packet to better understand the complexity and severity of their conditions. This will assist in a joint clinical decision-making process that will help determine what level of team care will be needed.

There are 3 baseline assessment packets available:

- Adult baseline packet: assesses for mood disorder, ADHD, anxiety/post-traumatic stress disorder (PTSD), physical symptoms, stressors, family coping style, and overall health.
- Child/adolescent baseline packet: assesses for ADHD, mood disorders, developmental disorders, anxiety/PTSD, stressors, family coping style, overall health, and functional impairment
- School baseline packet: assesses for ADHD, comorbidities and impairment, and is completed by a child's teacher or school counselor

Once completed, the packets are scored and discussed with the patient and family to plan treatment. A treatment cascade is used for stratifying complexity and severity and tracking the patient's progress (Fig. 1). This method helps the PCP, the patient, and the family to identify and determine the nature and extent of any mental health problem, classified as:

- Mild: requiring routine care with care management or peer advocacy as needed
- Moderate: requiring active care management with additional support from a mental health specialist or peer advocates within the team as needed
- Severe: requiring direct consultation with a mental health specialist and support from all team members as needed

These patients are followed by the appropriate MHI team members, who evaluate improvement and record details on score tracking sheets and encoded data in the electronic medical record (EMR). Treatment plans are guided by the Global Severity Score and complexity rating for the patient and the applicable Care Process Model. Counseling, psychopharmaceuticals, sleep hygiene education, and exercise may be utilized in the treatment of patients. If the patient is not improving, the team re-evaluates the treatment plan and can consider stepping up the level of team management.

Management of the patient's mental health needs and social challenges are key strategies to improve quality measures and medical outcomes and reduce utilization of mental health and other health-related services.

MHI Team

The clinic's MHI team is led by the PCP, whose responsibilities are to screen and diagnose patients, oversee and coordinate MHI treatment, and activate the MHI team for consultation and follow-up. The nursing staff or MHI coordinator is responsible for informing the patient of MHI benefits and what to expect; making appointments when requested by patients, physicians, or other staff; sending screening and data tools to the patient prior to appointments; and ensuring insurance coverage issues are addressed.

The RN care manager supports the treatment plan implementation and follow-up, coordinates and evaluates team efforts, evaluates adherence and family support, and promotes the MHI program with outside agencies. The on-site psychiatric Advanced Practice Registered Nurse (APRN) and/or psychiatrist provide PCP and staff education and training and may provide limited therapy and medication and diagnostic consultation. The mental health clinician (PhD, LCSW), also on-site, consults with the PCP, APRN, or psychiatrist as needed; uses MHI tools; and provides diagnostic consultation, mental health therapies (cognitive behavior therapy, interpersonal therapy), and education and training for the PCP and staff. The APRNs, psychiatrists, and therapists are shared among multiple sites. They also are available for consultation via phone and pager when not on-site. Most consultation and coordination occur through "message log," the communication tool in the EMR.

Figure 1. MHI Team Stratification Care Plan.

Staff Training

As part of the decision to implement MHI at a clinic site, Primary Care Clinical Program (PCCP) and IMG leaders discuss expectations with the physicians, the manager, and the regional medical and operations director. Once the site confirms its intention to implement MHI, a presentation is given by either PCCP leadership or the regional medical director to the full clinic staff and physicians. This presentation reviews MHI, how it benefits patients and the clinic, and the roles and responsibilities of all the team members, including the role of the patient and family and community peer advocates.

MHI team training helps PCPs and their clinic staff to implement 3 essential primary care practice changes: (1) to improve detection, monitoring, stratification, and confidence in the management of depression and other chronic health conditions; (2) to reinforce and track ongoing relational contact with patient, family, and community to promote adherence to wellness; and (3) to adjust treatment and management interventions if there is evidence of an inadequate response. Each clinic is encouraged to design a process flow chart that best fits the culture and clinic daily routine.

When the family presents a health issue that may involve a mental health concern, the trained PCP and staff introduce MHI. They validate mental health as important for overall health and explain the MHI assessment process to the family. The assessment includes completing a self-report measure that helps them organize their health information regarding "what is troubling them today", symptoms, family history, relational support, and environmental stressors. The provider and family then discuss this information and decide together, based on family preference, what level of team resources and support is needed to treat their health complexity.

Clinic team members leave MHI training with the assignment of choosing a physician champion, determining how much MHI support from psychology and psychiatry is needed to start with, and other important operational questions. Further follow-up between region medical directors and operations staff and the clinic manager and the physicians takes place over the next 4 to 8 weeks. Once MHI is implemented, "brown-bag" lunch training sessions are held every 1 to 2 months. Physicians discuss challenging cases or common mental health topics with care managers and their psychologist or APRN/psychiatrist. Staff training continues as part of the monthly clinic meetings led by the clinic manager. Clinics and regions participate yearly in an MHI Provider Retreat where teams present their success stories and quality improvement challenges.

Workflow and process changes

The key process change is the transition from a consultative model between PCPs and mental health clinicians to a collaborative model and the effective use of care management. This is accomplished through changes in processes and workflows:

1. Standard and comprehensive approach by all team members in evaluating, treating, and following patients with mental health conditions (not just depression) using evidence-based tools and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition guided by the MHI assessment packet
2. Documentation and communication using a common source (the EMR) by all members of the collaborative team
3. Coded data from EMR that is used both in patient management and research
4. Engaging care managers early in the care process, especially for patients with high complexity and global severity scores
5. Engaging clinic managers operationally in monitoring common parameters and following standard processes
6. Collaborating with on-site team members, sitting with patients together, and discussing challenging cases
7. Providing data on use of screening tools, trends in clinical scales, and patients at higher risk based on data from the depression, asthma, and diabetes datamarts to clinicians to support the management of their patient populations

Information Technology

Intermountain's data collection systems include both internal (longitudinal EMR with assessment, follow-up visits and communication tools, billing system, medical and Rx claims system, laboratory, and imaging) and external systems (satisfaction surveys, productivity surveys, EAP database, and third-party payers).

MHI data are collected from the completed packets and entered into the EMR, which features web forms with coded boxes to enter the information, such as PHQ-9 scores. In total, there are about 70 fields in the EMR where MHI data can be entered. This all becomes coded data in our EMR. This is important as coded data is the form of information that can be analyzed and reported most readily from IH's data warehouse. The clinical information from the EMR is added to the electronic data warehouse (EDW) along with all other information captured in the Intermountain system, including other clinical information such as pharmacy, labs and imaging; administrative information, such as billing from hospitals and clinics; and claims information from SelectHealth. This information is then reported to the clinician monthly in the form of a report listing a set of patient parameters that has been determined to be valuable, such as date of last visit to the MHI team, ER visits and hospitalizations for mental health, last PHQ-9, and change in PHQ-9. These data are used to guide clinical decision making and also populates the depression datamart. Patients with risk factors are identified from the datamarts and a list is given to each PCP and their team. The team then follows up with the patient and modifies the care plan with shared decision making.

The EMR is used by care managers and clinicians to communicate and track progress. An internal messaging system allows asynchronous communication when the MHI team is not on-site. Care managers enter notes into the EMR when they interact with patients; these are reviewed as needed by PCPs. Patient satisfaction data are routinely collected from all patients seen by a given clinician. Reports are provided to each physician each quarter. Productivity is monitored by operations to ensure that each team member is being fully utilized.

Leadership Involvement and Support

Having leadership support at all levels in an organization is key to successful quality improvement, including mental health integration. These levels include senior management, regional operations directors, clinic managers, and lead physicians. Intermountain provides financial support for clinical program operations. The PCCP has 6 FTE positions to manage 14 major areas of development and implementation. No current initiatives are supported by outside grants. The PCCP and MHI teams are accountable to the IH board and also to the IMG. They meet with IMG leadership regularly and report to the board through clinical program leadership.

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Initial support for MHI development and integration was provided through grants from the MacArthur Foundation and the Robert Wood Johnson foundation. The PCCP is supported by IH in its efforts to improve quality and outcomes in many primary care areas, including MHI.

It is important to identify and integrate leadership champions (people with mental health, medical, and operations backgrounds) to provide commitment and accountability for the program.

- Medical Director, PCCP
- Mental Health Integration Director
- Primary Care Clinical Program Director
- Region Medical Directors
- Regional Champions for MHI
- Regional Nurse Consultants
- Region Operations Directors
- Clinic Physician Champions
- Clinic Managers
- Medical Informatics and Analytics

Lessons Learned

- Each clinic must have a MHI physician champion and a capable coordinator.
- The clinic manager must be engaged and "own" the process.
- All levels of leadership within the practice, as well as in the community, should be involved.
- It is important to engage and treat the family as well as the patient.
- MHI goes far beyond "co-location."
- Adoption of MHI is local. Teams need processes, structure, and examples of success, but also the flexibility to adapt to their local culture.
- Recognition for success in improving the lives of patients and families needs to be visible.

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American Medical Group Association

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