What is Mental Health Integration?

A standardized clinical and operational team process that incorporates mental health as a complementary component of wellness & healing

* Mental Health includes Substance Abuse Recovery
Intermountain Medical Group

1,056 physicians
  342 primary care (Peds, FM, IM)
  55 behavioral health

265 advanced practice clinicians

Intermountain’s Strategy:
Clinical Integration

“...high-quality care at costs below average.”
Barack Obama

Focus on the Six Dimensions of Extraordinary Care:
  • Clinical Excellence
  • Operational Excellence
  • Service Excellence
  • Physician Engagement
  • Employee Engagement
  • Community Stewardship
Clinical Integration: Management of Complex Chronic Disease Primary Care Clinical Program

<table>
<thead>
<tr>
<th>Mental Health Integration Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diabetes, Asthma, Heart Disease, Depression, Obesity, Chronic Pain, SA, etc.</strong></td>
</tr>
<tr>
<td><strong>2/3 – cared for routinely in primary care</strong></td>
</tr>
<tr>
<td>Patient &amp; Family, PCP, and Care Manager (CM) as needed</td>
</tr>
</tbody>
</table>

*Primary Care Physician (PCP) includes: General Internist, Family Practitioner, Pediatrician

Summary of Published Outcomes

Rapid spread (85 Intermountain primary care clinics, 4 specialty clinics, and 49 non IH clinics)

Sustained team-based redesign

Improved patient health outcomes

Improved physician, staff and patient satisfaction

Decreased ER utilization & overall medical expense to health plan (Reiss-Brennan et al., 2010 Journal of Managed Health Care)

Normalized Team Care Improves Patient Outcomes (Reiss-Brennan, 2013 Journal of Primary Care and Community Health)
Difference in Per Patient Allowed Charges Between Pre and Post (in 2005 dollars)
For All Service Lines

<table>
<thead>
<tr>
<th>Service Lines</th>
<th>MHI (N=796)</th>
<th>Non-MHI (N=429)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHI Effected Service Lines</td>
<td>$640</td>
<td>$86</td>
</tr>
<tr>
<td>Remaining Service Lines</td>
<td>$1,046</td>
<td>$348</td>
</tr>
<tr>
<td>All Service Lines</td>
<td>$667 Savings</td>
<td>$725</td>
</tr>
<tr>
<td></td>
<td>$1,392</td>
<td></td>
</tr>
</tbody>
</table>

Remaining service lines includes:
- Obstetrical and Surgical;
- Urgent care; Specialty care;
- Pharmacy for other drugs; Lab; Outpatient Radiology and Testing;
- Outpatient other; Chronic and radiotherapy, and Other miscellaneous.

Savings to Commercial Insurance

Adherence to diabetes bundle
Distribution of Patients Treated at MHI and Non-MHI Clinics by Diabetes Control and Comorbidity

For patients with diabetes and depression and with 4 or less comorbidities:

- **MHI Clinics (N = 698):**
  - Good Control: 53.10%
  - Moderate Control: 45.60%
  - Poor Control: 1.30%

- **Non-MHI Clinics (N = 442):**
  - Good Control: 47.50%
  - Moderate Control: 49.90%
  - Poor Control: 2.60%

For patients with diabetes and depression and with 5 or more comorbidities:

- **MHI Clinics (N = 745):**
  - Good Control: 53.00%
  - Moderate Control: 42.50%
  - Poor Control: 4.50%

- **Non-MHI Clinics (N = 448):**
  - Good Control: 58.00%
  - Moderate Control: 37.60%
  - Poor Control: 4.40%

Patients who have depression have their diabetes in better control when treated at an MHI clinic (p < 0.01)

“Getting to the root of the problem”
Four Habits of High-Value Health Care Organizations
Bohmer, R. NEJM, December, 2011

**Specification and Planning**
**Infrastructure Design**
**Measurement and Oversight**
**Self-Study**
The Quality Challenge

Transitioning From Volumes to Value
Social Context Challenge

Emma
63 year old who has hip and knee pain, questions about 2 of her 18 meds, “no energy”, has a ten minute appointment at 3:30 pm
Diabetes, Hypertension, MCI, Arthritis, CHF
Exam is unremarkable except for slight low blood sugar
You talk about management of diabetes for a few minutes, answer the med questions wish them well, stand to leave, and with one hand on the door the husband says
“Um, before you go, we need to ask you about one other thing we are really worried about…”
Emma

Missed 5 days work
Not sleeping, not eating much
Not going out of the house
Cranky
Husband exhausted

The rest of the story

Your 3:40 is in a room and waiting, and your 3:50 is here early because they have to pick up a grandchild from soccer practice 20 minutes from now

Usual Care

Option 1: Traditional Usual Care
You obtain some more history (3 min)
Assess suicide risk (3 min)
Explore treatment options, insurance, access to care, will the family even follow up…(5 to 25 minutes if you include all staff time)
Staff gives patient drug samples, referral names, Emma is on her own
Your 3:50 yelled at staff and left very upset
Your receptionist has tried to reassure three other patients (4:00, 4:20, 4:30) that the doctor will be in soon (5 to 10 minutes and lots of energy used up)
What is Mental Health Integration? Enhancing Primary Care Value Sustaining Outcomes

To support Primary Care Providers and MHI Team members with best practices in an effort to:

- Reach as many families as possible
- Improve quality of life
- Increase satisfaction
- Reduce practice burden
- Decrease costs to the system
- Engage community resources

The Triple Aim and Shared Accountability

MARTY

Clinical Quality

Medical Directors

5. Community Resources

2. Workflow

4. Information System

1. Culture Leadership

Financing Operations

Our Patients and their Families

Primary Care Clinic

Secondary Care Clinic

Hospital Campus Clinic

Multispecialty Clinic

Primary Care Clinical Program

NAN

SOLOMON
Routinized Progress by Region
Summary Report

Mental Health Integration
5 Key Components
5 Key MHI Integration Components

I. Leadership & Cultural Integration
   *What is the mind body spirit context of your practice?*

II. Work Flow Integration
   *How do you decide who the patient sees and how often?*

III. Information Technology/EMR/Population Data Integration
   *How will you monitor and communicate your progress?*

IV. Operations & Financing Integration
   *What will be the cost to your clinic without?*

V. Community Resource Integration
   *Who else locally cares about this value cost?*

I. Leadership & Cultural Integration

*Quality Investment*
*Local Champions*
*Practice Teams*
*Accountability*
*Co-production*
- Train all
- Treat all
- Connect all

Shared care
II. Work Flow: MHI Team Roles

- Care Manager
  - Health Advocates
  - Psychiatrist or Psychiatric NP
  - Therapist (Psychologist, LCSW, EAP)
  - Peer Mentor

- Personalized Primary Care

- Community Resources:
  - CHADD
  - NAMI
  - Community Therapists
  - Physical Therapists
  - Nutritionist
  - Pharmacists

- Our Patients and their Families

- Clinic Staff:
  - RN, MA, Reception, Billing

- Information Technology / EMR / Data / Telehealth

II. Work Flow: MHI Treatment Cascade

- Case Identification
- Shared Decision Making

- MHI Packets

- ROUTINE CARE
  - Mild Complexity
  - PCP and Care Manager
  - Responsive
  - Family Support
  - GS=1-3

- COLLABORATIVE MHI TEAM
  - Moderate Complexity
  - Complex Co-morbidities
  - Family Isolated or Chaotic
  - GS=4-5

- MENTAL HEALTH TEAM
  - High Complexity
  - Psychiatric Co-morbidities
  - Family Support Variable
  - High Social Burden
  - Danger Risk
  - GS=6-7
Family Engagement Patterns

“Who do you most commonly go to or talk to when you are distressed or don’t feel well?”

Can we understand our patients better if we know where they are coming from?

“Isolated”
Disconnected/Avoidant

“Available in use”
Balanced/Secure

“Burnt out”
Confused/Chaotic

II. Patient and Family Care Planning Worksheet
Team Roles

Patient and Family

Seek care from you
Fill out packet and return it to the clinic
Treatment Decisions
Self management
Follow up
Lifestyle Changes

Team Roles

Primary Care Provider and Support Staff

Screen, diagnose, and treat
Use MHI Tools, Screening packets, PHQ-9
Activate and introduce other team members based on diagnosis and severity
Use the EMR to communicate with team members and collect data
Prepare patient and family for MHI
Team Roles

Care Manager

*Help with follow up:*
- Family adherence
- Patient and family education
- Outcome measures
- Self Care plans

*Help with MHI Tools*

*Use the EMR to communicate with team members and collect data*

*Mentor office staff in PPC process*

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Team Roles

Health Advocate

*Review Patient Schedules & fill out the Preventative/Social Tab*

*Contact new patients check to see how they are doing on their new medications etc.*

*Meet with patients that the physicians asks us to; teaching them specifics about the diagnosis they have; do a care plan with them.*

*Assist patients with obtaining discounted medications*

*Team meetings with both the physician, MA’s and a front office staff member who is involved with specific patient care.*
Team Roles
Psychiatrist / APRN

- Screen, diagnosis and treat
- Review and use MHI Packet
- Collaborate with patient, primary care clinician, and care manager in developing treatment plan
- Prescribing psychotropic medications
- Clinician and staff education
- Use the EMR to communicate with team members and collect data
- 70/30 productivity/communication

Team Roles
Therapist

- PhD, LCSW, EAP
- Screen, diagnosis, and treat
- Review and use MHI Packet
- Collaborate with patient, primary care clinician, and care manager in developing treatment plan
- Psychotropic medication knowledge
- Clinician and staff education
- Use the EMR to communicate with team members and collect data
- 70/30 productivity/communication
Team Roles
Community Resources

Vary by location and system
- NAMI – Peer Mentors
- CHADD
- Local clinicians
- EAP

Important partners and trained patient advocates

Family support
No cost service
Family classes

Mental Health Integration

Option 2: MHI

Obtain more history, explain MHI team (3 min)
Assess suicide risk (3 min)

You agree this is very important and would like to help with it. You give them an MHI packet and instructions to complete it prior to a follow up visit next week (2 min)

Emma and husband leave with treatment started and hope

You see your 3:50 at 4:00, apologizing for the delay (she makes it to practice on time)

You send a message to your care manager
call this family in 3 days, help with packet and appointment
III. Information System Integration
to support monitoring clinical improvement, communication, and
operation needs

Information for population based quality improvement

Financing and clinic operation needs

Information Systems

The Flow of Information: Team Message Log

Case Identification

MHI Packets

- ROUTINE CARE
  - PCP + CM
  - Responsive
  - Family Support
  - GSE 1-3
  - Mild Complexity

- COLLABORATIVE MHI TEAM
  - Complex Co-Morbid
  - Family Isolated/Chronic
  - GSE 4-6
  - Moderate Complexity

- MHS
  - Psychosis
  - Motility
  - Family Support
  - Burden
  - Difficulty
  - GSE >7
  - Severe Complexity

Team Feedback: MHI dashboard

Use of EMR

Registry (EDW) – 1999 to June 2013

Depression registry n = 416,433

148,527 currently active (in the last 12 months)

70,024 unique patients with phq9 and 53,316 with phq2 for
patients in depression registry with a total of 183,175 phq9 and
164,502 phq2

106,784 unique patients with phq9 and 153,637 with phq2 for all
patients with a total of 234,705 phq9 and 382,048 phq2

7.2% of patients not seen in primary care or behavior health
67% female 48% private insurance
A streamlined implementation process has resulted in exponential growth in MHI clinics (N = 82)

<table>
<thead>
<tr>
<th>Years for Routinization and Percent of Routinized Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td># of years for routinization</td>
</tr>
<tr>
<td>2000 (N=0)</td>
</tr>
<tr>
<td>2002 (N=0)</td>
</tr>
<tr>
<td>2004 (N=1)</td>
</tr>
<tr>
<td>2006 (N=13)</td>
</tr>
<tr>
<td>2008 (N=13)</td>
</tr>
<tr>
<td>2010 (N=21)</td>
</tr>
<tr>
<td>2012 (N=29)</td>
</tr>
<tr>
<td>2013 (N=29)</td>
</tr>
</tbody>
</table>

MHI dashboard

Measures:
- ED rate and cost for all dx and MH dx
- Hospitalization rate and cost for all dx and MH dx
- Total cost of care for SelectHealth patients only
- Screening rate for depression
- Change in PHQ9
- No show rate

http://edwtabtest/views/MHI-ERUtilization/ER?:embed=y&:tabs=no&:display_count=no
Linking Cost and Quality Outcomes

<table>
<thead>
<tr>
<th>PHQ-9 Initial Severity</th>
<th>Decrease of &gt;=5 points within 3 months</th>
<th>Decrease of &gt;=5 points within 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-27 points</td>
<td>70.9% *</td>
<td>62.6 %*</td>
</tr>
<tr>
<td>15-19 points</td>
<td>65.1% **</td>
<td>50.8 %</td>
</tr>
<tr>
<td>6-14 points</td>
<td>48.7% *</td>
<td>38.8 %</td>
</tr>
</tbody>
</table>

*Difference between significant improvement and no significant change is <0.001
**Difference between significant improvement and no significant change is <0.01

Significant Functional Improvement
54% Reduction in ER utilization
For depressed patients treated in MHI Clinics

IV. Operations & Financing Integration
Value Incentives and Sanctions

- Achieve a sustainable MHI program all regions
- Saving to System (ACO, SAO, Community)
- Value Foundation for ‘Medical/Health Home’
- Routinized MHI sites establish-baseline best practice
- TEAM FTE
- Identify operational barriers and plan operational resources for 2013-2014 budgets
- Disseminate evidence to communities
Team Roles – Regional Accountability

**Operations Director / RN Consultants / RMDs**

- Mentoring Champions
- Recruiting
- Staffing
- Finance
- Payer Contracting
- Implementation Change Agents

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Primary Care Clinics by Stage of MHI Implementation

Routinized
Adoption
Potential

Routinized: 75
Adoption: 24
Potential: 65

Urban
Rural
Uninsured School Based

Rogers, E. *Diffusion of Innovations*, 1995—discussion of stages
MHI Team Operational Score Card

5 dimensions:
- Leadership and culture
- Workflow integration
- Information system
- Finance / Cost of care
- Community Resource

Method:
- Clinics self-report on the 5 dimensions and receive a score measuring their evolution towards routinization

Example:
- Detail of score card and results at Salt Lake Clinic

<table>
<thead>
<tr>
<th>Key Components</th>
<th>Beginning Score</th>
<th>Current Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Outcomes</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>1. Leadership and Culture</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>2. Workflow Integration</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>3. Information Systems</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>4. Finance/Cost of Care</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>5. Community Resource</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>52</td>
</tr>
</tbody>
</table>
Team Performance Goals

Planning
Score: 25

Adoption
Score: 50

Routine
Score: 75

Journey Towards MHI Routinization  N = 82

Number of Coded PHQ9 from Depression Registry over time

- 416,433 pts
- 148,527 (active)

- 233, 273 pts
- 121,063 (active)
V. Community Resource Integration

Vary by location and system
- NAMI
- CHADD
- Local clinicians
- EAP

Important partners and trained patient advocates

Family support
Consumers as leaders and developers of high value care

V. National Communities Diffusing MHI
Common Set of Value Measures (2013)
Study Aims: identify the key factors in patient and staff social interactions underlying the improved outcomes observed in the MHI clinics.

How MHI:

a) improves outcomes for patients  
b) furthers an effective team approach among staff  
c) alters the culture of health care delivery
### Patient Reported Positive Outcomes

<table>
<thead>
<tr>
<th>Positive Outcomes</th>
<th>Total N =59</th>
<th>Potential N =19</th>
<th>Adoption N = 20</th>
<th>Routine N = 20</th>
<th>p</th>
<th>p trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Life Functioning</td>
<td>.92</td>
<td>.89</td>
<td>.85</td>
<td>100</td>
<td>.2173</td>
<td>.2306</td>
</tr>
<tr>
<td>Thinking Clearly</td>
<td>.31</td>
<td>.16</td>
<td>.25</td>
<td>.50</td>
<td>.0547</td>
<td>.0134*</td>
</tr>
<tr>
<td>Established Personal Relationship</td>
<td>.55</td>
<td>.37</td>
<td>.65</td>
<td>.65</td>
<td>.1260</td>
<td>.0792</td>
</tr>
<tr>
<td>Treatment Works</td>
<td>.66</td>
<td>.53</td>
<td>.55</td>
<td>.90</td>
<td>.0209*</td>
<td>.0130*</td>
</tr>
<tr>
<td>Connect Mind Body “Same Page”</td>
<td>.34</td>
<td>.16</td>
<td>.25</td>
<td>.60</td>
<td>.0084**</td>
<td>.0035**</td>
</tr>
<tr>
<td>Location Convenient</td>
<td>.20</td>
<td>.21</td>
<td>.25</td>
<td>.15</td>
<td>.7312</td>
<td>.0948</td>
</tr>
</tbody>
</table>

Pearson’s chi squared test and p for trend Chi square **p < 0.01 *p < 0.05
## Promoting Factors Reported by Staff

<table>
<thead>
<tr>
<th>Promoting Factors</th>
<th>Total N = 50</th>
<th>Potential N = 15</th>
<th>Adoption N = 17</th>
<th>Routine N = 18</th>
<th>p</th>
<th>p trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Self Confidence</td>
<td>.36</td>
<td>.06</td>
<td>.23</td>
<td>.67</td>
<td>.0007**</td>
<td>.0002**</td>
</tr>
<tr>
<td>Engage Patient</td>
<td>.72</td>
<td>.86</td>
<td>.53</td>
<td>.78</td>
<td>.1188</td>
<td>.6520</td>
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<td>Mental Health Comfort</td>
<td>.46</td>
<td>.33</td>
<td>.35</td>
<td>.78</td>
<td>.0129*</td>
<td>.0088**</td>
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<tr>
<td>Staff Confidence</td>
<td>.72</td>
<td>.80</td>
<td>.73</td>
<td>.72</td>
<td>.8887</td>
<td>.8337</td>
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<tr>
<td>Connected Staff</td>
<td>.54</td>
<td>.40</td>
<td>.59</td>
<td>.61</td>
<td>.1297</td>
<td>.0648</td>
</tr>
<tr>
<td>In House Team</td>
<td>.50</td>
<td>0</td>
<td>.80</td>
<td>.72</td>
<td>.00002**</td>
<td>N/A</td>
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<tr>
<td>Using Tools &amp; Team</td>
<td>.36</td>
<td>.33</td>
<td>.17</td>
<td>.94</td>
<td>.0001**</td>
<td>.0002**</td>
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<tr>
<td>Timely Response</td>
<td>.36</td>
<td>.13</td>
<td>.41</td>
<td>.50</td>
<td>.0792</td>
<td>.0313*</td>
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</table>

Pearson’s chi squared test and p for trend Chi square **p < 0.01 *p < 0.05

## What is MHI on the frontline?

<table>
<thead>
<tr>
<th>Staff MHI</th>
<th>Total N = 50</th>
<th>Potential N = 15</th>
<th>Adoption N = 17</th>
<th>Routine N = 18</th>
<th>p</th>
<th>p trend</th>
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<tr>
<td>Organized Process</td>
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<td>.13</td>
<td>.47</td>
<td>.83</td>
<td>.0002**</td>
<td>.0001**</td>
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<tr>
<td>Available Support</td>
<td>.72</td>
<td>.33</td>
<td>.88</td>
<td>.88</td>
<td>.0032**</td>
<td>.0647</td>
</tr>
<tr>
<td>Empowered to provide better care</td>
<td>.62</td>
<td>.26</td>
<td>.88</td>
<td>.66</td>
<td>.0024**</td>
<td>.0272*</td>
</tr>
<tr>
<td>Regular Expectation</td>
<td>.56</td>
<td>.13</td>
<td>.88</td>
<td>.61</td>
<td>.0001**</td>
<td>.0100*</td>
</tr>
</tbody>
</table>

Pearson’s chi squared test and p for trend Chi square **p < 0.01 *p < 0.05
“My doctor was the first person to treat me as a whole person...”

Common MHI Team Process Steps
Patient & Staff Convergence
Summary

Normalizing mental health as an organized team process within the context of primary care offers promising results for improving outcomes for patients with chronic disease.

The screening, team management and follow-up care for depression that patients were receiving were the intended steps of the MHI program and described engaged patient experiences in routinized clinics.

Using the patients’ perception of their outcomes and their team care experience to improve health care quality is essential for health reform towards patient centered care.

Multiple Team Touches

(p < .001)
What Matters Most
N = 59

- They Care
- Being Heard
- Trust Competent
- Staying Well
- We matter

What Is Value?

“Getting to the root of the problem, making it affordable and successful”

WHI
Impact of MHI on diabetes bundle compliance

* Statistically significant: P < 0.01
  * Confidence Intervals
  * Odds Ratio

The Value Challenge
Population Health

Defined around patient experience
Cost measured
Outcomes Achieved
Our Job is Not Over

- Expanding team work requires institutional will
- Will patient outcomes last?
- Will this reduce overall healthcare cost?
- Lifetime gains require finding ways to broaden team support to family and community
- You manage what you measure
- A key factor in our health is the health of others around us