Team Facilitating Factors that Promote Positive Patient Outcomes

Mixed Methods Studies of Mental Health Integration

Implementing Research Into our Common Vision

Brenda Reiss-Brennan, PhD, APRN
Intermountain Healthcare
Primary Care Clinical Program
brenda.reiss-brennan@imail.org
April 2016
Highly Integrated Health System

Our Charge: “To help people live the healthiest lives possible”

Hospitals
- Since 1975
  - 22 hospitals
  - 2,784 licensed beds

SelectHealth
- Since 1983
  - Health plans
  - 700,000+ members

Medical Group
- Since 1994
  - 1,200 employed physicians
  - 558 advanced practice clinicians

Clinical Programs
- Since 1997
  - 10 key service lines

Intermountain Healthcare
What Shapes Population Health?

Lifestyle 51%
- Smoking
- Obesity
- Stress
- Nutrition
- Blood pressure
- Alcohol
- Drug use

Environment 19%

Health Care 10%

Human Biology 20%

1 death every 20 seconds by 2020  (WHO, 2014)
The Intermountain Way

Improved quality & service

Evidence-based practice

Systematic approach: measure & improve

ALWAYS DO THE RIGHT THING!

SUCCESS

Always led by clinical but including operational, financial and even governance!
Culture of a Learning: Builds Value

- Common Vision
- Clinical Work Processes
- Data and Evaluation Transparency
“If I don’t do it, who else will? I am all they have. I have been forced to treat depression alone.”

(PCP Non-MHI Clinic)
I was left to figure it out on my own, we never talked about it, he just refilled my meds (p < .01) Non-MHI Clinic
**Clinical Integration: Management of Complex Chronic Disease in Primary Care**

<table>
<thead>
<tr>
<th>Mental Health Integration Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diabetes, Asthma, Heart Disease, Depression, Hypertension, ADHD, Obesity, Chronic Pain, SUD, etc.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2/3 – cared for routinely in primary care</th>
<th>1/6</th>
<th>1/6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient &amp; Family, PCP, and Care Manager (CM) as needed</strong></td>
<td>PCP, CM + mental health as needed</td>
<td>PCP with MHI Specialist Consult</td>
</tr>
</tbody>
</table>

*Primary Care Physician (PCP) includes: General Internist, Family Practitioner, Pediatrician*
IMPROVING OUTCOMES & BENDING THE COST CURVE

Evidence-based Care Process Models
Mental Health Integration (CPM) provides evidence based team approach and tools for caring for patients/persons and families.

What is Mental Health Integration?

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

### Essential Integrated Elements

<table>
<thead>
<tr>
<th></th>
<th><strong>Leadership and culture</strong> – champions establishing a core value of accountable and cooperative relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>Workflow</strong> – engaging patients on the team and matching their complexity and need to the right level of support</td>
</tr>
<tr>
<td>3</td>
<td><strong>Information systems</strong> – EMR, EDW, registries, dashboard to support team communication and outcome tracking</td>
</tr>
<tr>
<td>4</td>
<td><strong>Financing and operations</strong> – projecting, budgeting and sustaining team FTE to measure the ROI</td>
</tr>
<tr>
<td>5</td>
<td><strong>Community resources</strong> – who are our community partners to help us engage our population in sustaining wellness</td>
</tr>
</tbody>
</table>
Our framework for Mental Health Integration is focused on clinical quality, the patient experience and decreasing overall costs.

Strategy: Mental Health Integration – A team approach to clinics.
Work Flow - Match Population Social Needs
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
The Flow of Information: Team Message Log

Case Identification

MHI Packets

TEAM FEEDBACK: MHI dashboard

RoutIe ne Care
PCP + CM
Responsive
Family Support
GS=1-3
Mild Complexity

CoLLaboRatIve MHI Team
Complex Co morbidity
Family Isolated/Chaotic
GS=4-6
Moderate Complexity

MHS
Psych Co Morbidity
Family Support
Burden
Danger Risk
GS=6-7
Severe Complexity

Registry (EDW) – 1999 to present

Depression registry n = 501,258 distinct patients

Most recent reporting period (last 12 months): n=172,879 distinct patients
  • 56,377 distinct patients have at least one coded PHQ-9
Building Data Story - Improving Physician Satisfaction

Primary Care Provider Impressions

- Ability to identify mental health needs of patients
- Ability to work with patients with mental health needs
- Ability to work with families of patients with mental health needs
- Ability to work with non-compliant or "difficult to treat" patients
- Ability to work with families of non-compliant or "difficult to treat" patients
- Resources and support to help meet mental health needs
- Potential for effective mental health integration in clinic

* = p < .05
** = p < .001
Improving Patient Satisfaction

The sensitivity of the physician to your emotional or mental health concerns
How well the physician listened and understood what you were saying (about your emotional or mental health concerns)
How well the physician explained things to you (about your emotional or mental health concerns)
How knowledgeable the physician was about your emotional or mental health concerns
How well your mental health services have been coordinated
Being able to get the mental health care you need when you need it
The overall quality of care and services you received for your emotional or mental health needs

* = p < .05
# Linking Data - 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
Establishing Business Case -
Total Savings to the Insurance Plan (SelectHealth)

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

Remaining service lines includes:
- Inpatient Services: Obstetrical and Surgical,
- Outpatient Services: Urgent care, Specialty care,
- Ancillary Services: Pharmacy for other drugs, Lab, Outpatient Radiology and Testing, Outpatient other, Chemo and radiotherapy, and Other miscellaneous.
Scaling Team-Based Care for Population Health

Mental Health Integration
Intermountain Primary Care & Specialty Clinics

- Holistic approach to patient’s health
- Best practices in all clinical domains
- Team members work at the “top of their licenses”
- Established routine protocols and system-based care coordination
- Foundation for population health management and financial risk
Measuring Process Change Over Time: Primary Care Clinics by Phase of MHI Implementation

Rogers, E. *Diffusion of Innovations*, 1995—discussion of stages
# APEX (Electronic) Scorecard

## Score Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Score</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leadership and Culture</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>2. Workflow Integration</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>3. Information Systems</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>4. Financial/Cost of Care/Operations</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>5. Community Resources (Internal and External)</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td><strong>22</strong></td>
<td><strong>66</strong></td>
</tr>
</tbody>
</table>

## Planning Score: 11-33

## Adoption Score: 34-53

## Routine Score: 54-66

### SECTION 1: Leadership and Culture

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Triple Aim Leadership</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Institutional leaders (i.e., Operations Officer, Assistant Operations Officers, Medical Director and Regional Nurse Consultant) are informed and responsible for Population Health Outcomes for their setting or region. Quality of care, cost of care, patient and family experience.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physician champion</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>A PCP at the site is designated and engaged as the “champion” or leader for Mental Health Integration.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Practice Manager establishes workflow and makes sure all team members are accountable</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Practice Manager is engaged and takes ownership for MHI at the site. This includes assigning resources and accountability for leadership and monitoring cultural change toward team base care processes (MHI &amp; PCC). Accountability for MHI resides at the site.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 2: Workflow Integration

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHI team care process model and operations</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MHI Staffing model for MHI needs. Active resources are identified and reviewed (see document) 3 - Regional Leadership meeting is agreed upon.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 3: Information Systems

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHI staffing model for MHI needs</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Continuous monitoring of staffing needs &amp; preparing MHI budget. 2 - Team roles and responsibilities. Defined and assigned. 3 - Regional Leadership meeting. Schedule meeting and define membership.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 4: Community Resources (Internal and External)

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MHI staffing model for MHI needs</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Continuous monitoring of staffing needs &amp; preparing MHI budget. 2 - Team roles and responsibilities. Defined and assigned. 3 - Regional Leadership meeting. Schedule meeting and define membership.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Information

- All medical providers (Medical assistants, PAs, Care Managers, Health Advocates, Case Guides, Practice Managers, Social workers) working at the clinic are trained in the MHI program.
- Understanding MHI key components (scorecard, Leadership and Culture, Workflow Integration, Information System, MHI team care process model, and operations, MHI role and accountability, ongoing training of the implementation process of planning, adoption, and realization). Part I: Mental Health Integration Overview (video). Part II: Orientation to the Mental Health Integration Family Function Profile (video). Part III: Mental Health Integration Baseline Evaluation Packets (video).
- MHI providers and staff participate in MHI training provided by Regional/central office leadership.
- MHI Managers: Assign videos to MHI providers and staff. 3: Use My Learning to track that 75% of MHI providers and staff have completed videos. 2: Medical and MHI Providers read and understand the Care Process Model (CPM).
- MHI Providers: Assign videos to MHI providers and staff. 2: Use My Learning to track that 100% of MHI providers and staff have completed videos. 2: Medical and MHI Providers read and understand the Care Process Model (CPM).
- MHI Managers: Assign videos to MHI providers and staff. 3: Use My Learning to track that 75% of MHI providers and staff have completed videos. 2: Medical and MHI Providers read and understand the Care Process Model (CPM).
Adding Ethnographic Methods
Differences in patient-perceived coordinated team interactions by Mental Health Integration (MHI) clinic phase.
Multiple Team Touches
(p < .001)

‘we are on the same page’
Key Research Aim

“Do clinics with high performing team-based care provide greater value compared to other clinics operating under a more traditional patient management approach and as measured by quality and clinical outcomes, cost, utilization, patient and family service and staff outcomes?”
First – A Key Definition

Team-Based Care (TBC) is the combination of Personalized Primary Care (PPC) and Mental Health Integration (MHI)

TBC = PPC + MHI
Team performance towards Routinization

Progression of Team-Based Care in the Intermountain Delivery System

Bar chart showing the progression of team-based care from 2003 to 2013 in the Intermountain Delivery System. The chart compares the number of clinics implementing usual care practices, team-based care practices, and highly routinized team-based care practices over the study period. The study population is 128,448 patients, and the total patient years are 163,226.
Delivery System Study: Design and Methods - Summary

DELIVERY SYSTEM COHORT

Longitudinal closed cohort
- At least one visit to IMG PCP within 2003 – 2005.
- Adult patients (≥ 18 years of age).

Stable, consistent relationship with Intermountain
- Patients accessed care within Intermountain facilities/clinics for ≥10 years; allowing 1 gap year.

Size ≈ 130,000 patients
Team-Based Care (TBC) Intervention

Characteristics of Routinized TBC

- Physician engagement
- Care coordination & established routine protocols
- Team communication through EMR and reporting tools
- Operational efficiency and monitoring
- Outreach to family and community

MHI exposure based on Roger’s diffusion of innovation levels and MHI scorecard:

- Level 0: No MHI
- Level 1: Planning (score 1 – 20)
- Level 2: Adoption (score 21 – 40)
- Level 3: Routinized (score 41 – 63)

PPC exposure based on modified NCQA self assessment tool:

- Level 0: No PPC
- Level 1: Planning (score 35 – 64)
- Level 2: Adoption (score 65 – 84)
- Level 3: Routinized (score >= 85)

Note: Each practice was given an MHI and PPC exposure level by year (2003 to 2013)
Delivery System Study: % Change in Quality (All Payers)

Routinized TBC vs. No TBC

- **Annual visit with PCP:** 8.75% (p=0.002)
- **PHQ9 Screen:** 90.58% (p<0.0001)
- **Adherence to DM Bundle:** 25.97% (p<0.0001)
- **HTN in Control:** -12.76% (p=0.002)
- **Advanced Directives:** -3.30% (p=0.281)

*Self-Care Plans were also evaluated (outcome = 559%, p<0.0001); but was not included in graphic due to scale differences*
More Effective Utilization of Healthcare Services

An investment of $22 per-member-per year (PMPY) decreased medical expenses by $115 PMPY
Team-Based Care: More Than Just a Program

“My doctor was the first person to treat me as a whole person...”