Mental Health Integration (MHI)
From Process to Practice

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Medical Director of Mental Health Integration

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Pediatrician at Memorial Clinic
Descartes and Mind-Body Dualism
• **1 in 5** children has a diagnosable mental health disorder that interferes with daily function and requires intervention of monitoring.

• **Only 20%** of those children are receiving adequate management of their illness.

• Underutilization of Mental Health Professionals due to
  - Stigma
  - Reluctance to seek help
  - Cost
• Formation of Task Force on Mental Health (TFOMH)
• Gaps in Mental Health is serious and is a top concern.
• **Mental Health Competencies:** (Knowledge and skills to care for)
  • ADHD
  • Anxiety
  • Depression
  • Substance abuse
  • Recognizing psychiatric and social emergencies
• Resident training is inadequate. Will require innovations in residency training and CME.
• **Collaborative relationships** with MH specialists **must** precede.

M. Burton, Pediatrics November 2010, 126 (5) 1006-1007
AACAP Guide to Building Collaborative Mental Health Partnerships in Pediatric Primary Care:

• **Core Components:**
  • Timely access to psychiatric consultations
  • Direct psychiatric services to children and families
  • Care coordination
  • Education for PCPs

AACAP, 2010
MHI Has Demonstrated Value-Based Results

JAMA shows that integrating mental and physical health through primary care teams results in better clinical outcomes and lower costs.

### 10-YEAR STUDY 2003-2013

<table>
<thead>
<tr>
<th>Participants</th>
<th>Screened for Depression</th>
<th>Documented Self Care Plan</th>
<th>Adhered to Diabetes Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>113,452</td>
<td>46.1% TBC</td>
<td>48.4% TBC</td>
<td>24.6% TBC</td>
</tr>
<tr>
<td>113</td>
<td>24.1% TPM</td>
<td>8.7% TPM</td>
<td>19.5% TPM</td>
</tr>
<tr>
<td>27 Team-based care (TBC) medical practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 Traditional practice management (TPM) medical practices</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Screening for Depression**

- TBC: 46.1%
- TPM: 24.1%

**Documented Self Care Plan**

- TBC: 48.4%
- TPM: 8.7%

**Adhered to Diabetes Protocol**

- TBC: 24.6%
- TPM: 19.5%

### EMERGENCY ROOM VISITS

- Reduced 23%

### HOSPITAL ADMISSIONS

- Reduced 10.6%

### PRIMARY CARE ENCOUNTERS

- Reduced 7%

### PAYMENTS TO PROVIDERS

- Reduced 3.3%

($3,401 for TBC vs. $3,516 for TPM)

* Savings of $115.00 Per patient per year (PPYR)
* Savings of over $13 Million per year

Brenda Reiss-Brennan, PhD, APRN, et al. 2016

JAMA
Understanding the MHI Model – What Is It?

• Patient access to effective care team members accountable for team-based care
• Organized around the PCP; Monitored by operations managers
• PCPs trained in holistic patient care with measurable outcomes
• Followed Care Process Model protocols for mental/behavioral health conditions
• MHI Providers utilized when appropriate and necessary

• For every 4-6 PCPs: 4 hrs/wk prescriber and 8 hrs/wk therapist coverage
Understanding the MHI Model and Resource Allocation

Clinic MHI Team:
- Primary Care Clinician
- Psychiatrist / APRN
- Care Manager
- Care Advocate
- Care Guide
- Social Worker
- Clinic Manager
- Clinic Staff: RN, MA, Reception, Billing

Community Resources:
- Community Therapists
- Nutritionists
- Pharmacists
- Peer Mentors

Our Patients and their Families

Clinic Staff: RN, MA, Reception, Billing

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MHI Incorporates Integrated Care Process to Provide Patient Support

Screening Tools Help Determine Patient Severity & Complexity and Appropriate Team Care Support

MHI Treatment Cascade

Case Identification

Shared Decision Making

Standardized Assessment Tools

PHQ-2, PHQ-9, & MHI Packet

ROUTINE CARE
Mild Complexity
PCP and Care Manager
Responsive
Family Support

COLLABORATIVE
MHI TEAM
Moderate Complexity
PCP, Care Manager, &
MHI Provider Consult
Complex Co-morbidities
Family Isolated or Chaotic

MENTAL HEALTH TEAM
High Complexity
PCP, Care Manager,
& MHI Psychiatrist
Psychiatric Co-morbidities
Family Support Variable
High Social Burden
Danger Risk

SPECIALTY CARE
High Complexity
Psychiatrist Referral
Stabilization requires
higher level of care
Safety

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Most Patients Cared For By Their PCP through MHI Process

<table>
<thead>
<tr>
<th>Mental Health Integration Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes, Asthma, Heart Disease, Depression, Hypertension, ADHD, Obesity, Chronic Pain, SUD, etc.</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>Patient &amp; Family, PCP, and Care Manager (CM) as needed</td>
<td>PCP, CM + mental health as needed</td>
<td>PCP with MHI Specialist Consult</td>
</tr>
</tbody>
</table>

PCP includes: General Internist, Family Practitioner, Pediatrician
A Cultural Pathway towards Team Routinization

**Leadership & Culture**
- Committed Leadership
- Identify Population Complexity
- Implement staffing & provider needs
- Assign all roles relative to MHI CPM
- Routine Meetings
- Monitored adherence
- Continuous training & support provided
- Champions leading

**Workflow Integration**
- Design patient workflow
- Identify Patient & Family Complexity
- Implement strategies to address barrier
- Develop care management strategy
- Identified workflow gaps; Improved process
- Engaged providers w/ treatment cascade
- Difficult case conferences

**Information Systems**
- Complete team scorecard
- Design MHI Dashboard
- Providers assign complexity & stratification
- Dashboard identifies gaps & chronic disease action plans
- Tracked patient complexity data
- Dashboard used to target outcomes results

**Financing & Operations**
- Review & Track clinical & operational reports quarterly; Team FTE
- Gaps identified & action plans developed
- Refine meaningful tools – TBC ROI
- Reports used to improve performance
- Data used to target utilization & cost gaps

**Community Resources**
- Inventory of potential partners
- Identify support groups & classes
- Process developed to provide resources
- Team link patients to groups, classes, peer support
- Documented community referrals
- Engage new partners; patient mentors
STEADY PROGRESS: MHI ADOPTION 2000-2018

Number of Clinics

- **Planning**
- **Adoption**
- **Routinized**

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MHI Scorecard Measures Provider & Clinic Performance

Provides objective, real-time assessment of system performance of MHI

**Safety:**

*Screenings/Assessments* (PHQ, Columbia, Risk Assessment, and Safety Plan)

*MHI Packet Utilization* (e.g. % administered/completed, Complexity documentation, etc.)

**Quality:**

*Follow-Up PHQ* at CPM Intervals: 6 Week, 3/6 mos., 11-13 mos.

*Depression Remission Rate* (stratified by Partial/Full Remission, No Change, etc.)

**Experience:**

50% to *CG-CAHPS* scores

50% to *Employee (Caregiver) Survey*

**Access:**

*Staffing:* (e.g. Full staffing, minimum ratio compliance)

*Utilization/Productivity Metrics* (e.g. Visit Volumes, Scheduled Time—70/30, Visit Range, No-Show, 3rd Next)

**Stewardship:**

*ED/IP Admission Rates*

**Cost** (e.g. PMPM, Neutrality: Billing/Collections vs. TBC Labor Expense, NOI, etc.)
## A PROCESS-INFORMED APPROACH TO MHI IMPROVEMENT

### Returning To Green—Crosswalk:

<table>
<thead>
<tr>
<th>Planning</th>
<th>Adoption</th>
<th>Routinization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety</strong></td>
<td>Develop screening processes for PHQ, MHI Packet, C-SSRS, Risk Assessment, &amp; Safety Plan</td>
<td>Screening processes are trained</td>
</tr>
<tr>
<td></td>
<td>Design integrated patient workflow</td>
<td>Strategy put into place for high risk patients</td>
</tr>
<tr>
<td></td>
<td>Develop care management &amp; follow-up processes</td>
<td>Remission rate is captured during follow-up encounters</td>
</tr>
<tr>
<td></td>
<td>PHQ is administered at follow-up</td>
<td>Physical health conditions tracked</td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td>Clinic team made aware of CG-CAHPS</td>
<td>CG-CAHPS metrics are reviewed</td>
</tr>
<tr>
<td></td>
<td>Clinic team takes employee survey once a year</td>
<td>Employee survey results are retrieved</td>
</tr>
<tr>
<td><strong>Patient Experience</strong></td>
<td>Clinic aware/informed on staffing needs</td>
<td>Population complexity &amp; staffing financials reviewed</td>
</tr>
<tr>
<td></td>
<td>Informed on access metrics (no show, 3rd next, slot utilization)</td>
<td>Access &amp; operations metrics reviewed</td>
</tr>
<tr>
<td></td>
<td>Supplied w/ patient visit information</td>
<td>Patient visits info reviewed</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>Billings/collections &amp; labor expense shared</td>
<td>All data is reviewed at least once per year</td>
</tr>
<tr>
<td></td>
<td>NOI, MHI charges, &amp; collections info provided</td>
<td>How to improve financial outcomes towards cost neutrality is considered</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stewardship</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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MHI Investment Generates Projected ED Savings of $5.9M for Intermountain System

MHI Financial Performance for December YTD 2018

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHI Revenue</td>
<td>$2,389,074</td>
</tr>
<tr>
<td>— MHI Charges</td>
<td>$3,992,987</td>
</tr>
<tr>
<td>— MHI Deductions</td>
<td>($1,570,598)</td>
</tr>
<tr>
<td>MHI Expense (Only MHI Provider Expense)</td>
<td>($1,812,255)</td>
</tr>
<tr>
<td>MHI NOI</td>
<td>$576,819</td>
</tr>
<tr>
<td>Projected ED Savings</td>
<td>$5,919,360</td>
</tr>
<tr>
<td>NOI net Projected ED Savings</td>
<td>$3,288,706</td>
</tr>
</tbody>
</table>

Based upon JAMA Results Methodology

Billed PCP Visits w/ Pysch. 134,565
Billed MHI Provider Visits 29,320
Total Billed Clinic Visits 1,509,129
No Shows (9%) 135,547
No Show MHI Visits 6,004
# of Patients (MH Primary Dx) 80,580

30% in Action:
The Care Team is able to better manage MH visits in the absence of the MHI Provider
MHI Provides Multidisciplinary Staffing to Support Clinic Teams

### MHI Staffing (Current Status)

<table>
<thead>
<tr>
<th>Geography</th>
<th>Primary Care Providers</th>
<th>Total Primary Care Clinics</th>
<th>Total Unique Patients</th>
<th>Total Rx FTEs</th>
<th>Total Tx FTEs</th>
<th>Total MHI Providers Involved</th>
<th># of Fully Staffed Clinics*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache</td>
<td>35</td>
<td>7</td>
<td>46,979</td>
<td>0.2</td>
<td>3.3</td>
<td>8</td>
<td>2/7</td>
</tr>
<tr>
<td>Salt Lake (CSL)</td>
<td>40</td>
<td>12</td>
<td>49,528</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt Lake (NSL)</td>
<td>100</td>
<td>12</td>
<td>100,047</td>
<td>4.4</td>
<td>7.1</td>
<td>21</td>
<td>26/34</td>
</tr>
<tr>
<td>Salt Lake (SSL)</td>
<td>60</td>
<td>10</td>
<td>85,903</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>31</td>
<td>9</td>
<td>22,094</td>
<td>0.1</td>
<td>1.8</td>
<td>4</td>
<td>1/9</td>
</tr>
<tr>
<td>Southwest</td>
<td>41</td>
<td>10</td>
<td>61,330</td>
<td>0.9</td>
<td>3.2</td>
<td>13</td>
<td>5/10</td>
</tr>
<tr>
<td>Utah Valley</td>
<td>47</td>
<td>12</td>
<td>42,635</td>
<td>0.3</td>
<td>3.8</td>
<td>11</td>
<td>5/12</td>
</tr>
<tr>
<td>MKD/Weber</td>
<td>68</td>
<td>10</td>
<td>70,226</td>
<td>1.4</td>
<td>3.2</td>
<td>12</td>
<td>9/10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>422</strong></td>
<td><strong>82</strong></td>
<td><strong>478,742</strong></td>
<td><strong>7.3</strong></td>
<td><strong>22.4</strong></td>
<td><strong>69</strong></td>
<td><strong>48/82</strong></td>
</tr>
</tbody>
</table>

* Fully-Staffed Clinics = both Rx and Tx FTE available for PCPs at clinic.

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MHI Rx

- Psychiatrist
- APRN

MHI Tx

- Psychologist
- LCSW
Adjusting MHI to Meet Geographic Needs

CURRENT MODEL DELIVERY:
• Hub & Spoke
• Hub & Spoke + Collaborative Care
• Fully-staffed MHI Team-based Care
• Hub & Spoke
• Virtual Psychiatric MHI Support
• Hub & Spoke w/ Triage Placement

MODEL INNOVATION:
• Dr. Jeff Clark and AIMS Model
  o BH Care Manager
  o Patient registry
  o 30-minute therapy
  o Psychiatrist as consultant
• Shuffle MHI FTE Providers to optimize need of clinics (Example: Mickelson and Bivens from SL Clinic to Bountiful)
• MHI Scorecard Huddle
  • Memorial Clinic (Dr. Mickelson & Dr. Lash)
  • Dr. Jessica Jones as Consultant
    o Hub & Spoke w/ EMR Consult
    o Rural telehealth visits
• Rural = MHI + Outpatient Clinic Support
  o Dr. Burrow providing telehealth
  o Higher complexity then MHI
MHI 2.0: Current Improvement Initiatives

**Safety:**
- Crisis protocol (phone, in-person, primary, specialty) flashcards
- CALM training

**Quality:**
- Scorecard development (KPI, depression remission, CSSRS, etc.)
- “Big 5” CPM flashcard (depression, suicide prevention, anxiety, SUD, ADHD) development & training

**Experience:**
- MHI Provider leading huddles
- PCP Lead roles & responsibilities defined & trained
- Care management alignment

**Access:**
- Registry - *Alluceo
- Tiered triage – PCP vs Specialty clinic, MD vs APP, PhD vs LCSW
- Fidelity to short-term model - # of visits/patient & 3rd next available

**Stewardship:**
- Optimize MHI Provider 30% time - quarterly 5-10 min clinical pearl handout during PPC meetings
- Therapist as tiered-triage registry manager - use of collaborative codes for non-commercial insurers
- Explore MD/APP mix to value equation – From MD to APP in routinized clinics

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### ROUTINE CARE

- **Mild Complexity**
  - PCP and Care Manager
  - PHQ Severity Score <14
  - Psychotherapy

### COLLABORATIVE MHI TEAM

- **Moderate Complexity**
  - PCP, Care Manager, & MHI Specialist Consult
  - PHQ Severity Score 15-19
  - Psychotherapy AND/OR Antidepressant

### MENTAL HEALTH TEAM

- **High Complexity**
  - PCP, Care Manager, & MHI Psychiatrist
  - PHQ Severity Score >20
  - Antidepressant AND Psychotherapy

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**Diagnosis of Major Depressive Disorder** requires 5 or more symptoms according to DSM Criteria. Use PHQ Symptom Score. Severity of Major Depressive Episode determines treatment recommendations, measures interventions and treatment to remission. Use PHQ Severity Score.

**Medication Recommendation for Antidepressant Therapy**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Starting Dose</th>
<th>Titrating Schedule</th>
<th>Max Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>fluoxetine</td>
<td>5-10mg</td>
<td>5-10mg q1-2weeks</td>
<td>80mg</td>
</tr>
<tr>
<td>escitalopram</td>
<td>5-10mg</td>
<td>5-10mg q1-2weeks</td>
<td>20mg</td>
</tr>
<tr>
<td>sertraline</td>
<td>25-50mg</td>
<td>25-50mg q1-2weeks</td>
<td>200mg</td>
</tr>
</tbody>
</table>

**Psychotherapy**

- **FOLLOW-UP in 4-6 WEEKS.** Repeat PHQ9. In result of Good or Partial Response to PHQ, continue therapy and follow-up until 12 weeks. Continue therapy until remission is achieved.

**Antidepressant Therapy**

- **2-WEEK FOLLOW-UP** phone call by CM. Reinforce patient/family education; check for side effects. 4-WEEK FOLLOW-UP visit. Repeat PHQ-9. If Partial or No Response, FOLLOW-UP in 4 WEEKS (at 8 WEEKS). 12-WEEK FOLLOW-UP visit. Repeat PHQ-9.

**PHQ Response**

- **Good Response**
  - Continue regimen until remission is achieved

- **Partial Response**
  - Continue same regimen until next check up

- **No Response**
  - Consider adding or changing to antidepressant

**2nd line: SNRI/Other: venlafaxine, duloxetine, bupropion, mirtazapine**

**FDA approved for children & adult**

**FDA approved for only adult**

**PHQ Response**

- **Good Response**
  - Continue regimen until remission is achieved

- **Partial Response**
  - Continue current therapy & dose. Follow up in 4 weeks

- **No Response to Trial @ 4 weeks**
  - Assess for compliance, bipolar, substance use, or other factors. Increase dose by at least 50% for 4 more weeks.

- **No Response to Trial @ 8 weeks**
  - Reassess. Switch to another 1st-line drug

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**MHI Major Depression Disorder & General Anxiety Disorder**

- **Treatment Overview**

- **Standardized Assessment**
  - PHQ-2, PHQ-9, & MHI Packet

- **In case of a mental health emergency (positive question #9 on PHQ9)?** Follow suicide prevention protocol: Assess risk, administer CSSR-5, & safety plan.

---

**Stratify Patient**

- **1st line: SSRI: fluoxetine, escitalopram, sertraline, citalopram**

- **2nd line: SNRI/Other: venlafaxine, duloxetine, bupropion, mirtazapine**

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**Medication Starting Dose**

- **fluoxetine**
  - 5-10mg

- **escitalopram**
  - 5-10mg

- **sertraline**
  - 25-50mg

---

**Stratify Patient**

- **1st line: SSRI: fluoxetine, escitalopram, sertraline, citalopram**

- **2nd line: SNRI/Other: venlafaxine, duloxetine, bupropion, mirtazapine**

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**第三个标签**
Sascha

• 16 year old female
• Complex social situation
• Outlying primary care doctor
• Well Child visit, no depression screening, 2 months prior
• Presentation: Acute mental health crisis
• MHI process: Depression screening/Care management, PHQ score 15
• Diagnosis: Depression with severe anxiety, psychosocial stress
• Treatment, SSRI, Intensive outpatient psychotherapy
• Outcome: Dramatic reduction in sx, PHQ score 4, ongoing SSRI and outpatient psychotherapy
Tanner

- 14 year old male
- Top academic percentiles, every advantage
- Sustained concussion in sledding accident w/subdural hemorrhage
- Long post concussion recovery
- Presentation: Persistently low school performance despite massive efforts
- MHI process: PCP evaluation, Care Coordination, Neuropsychiatric Testing
- Diagnosis: Acquired Attention Deficit Disorder
- Treatment: Stimulant Therapy
- Outcome: Increase to baseline performance, Academic scholarship
Deandre

• 6 year old male
• Very Complex social situation, Domestic violence, substance abuse, limited resources
• Multiple Social Determinants of health issues
• Follow up and compliance chronic problem for family
• Presentation: Anger outbursts, poor school performance, behavioral problems
• MHI process: PCP evaluation, Care management
• Diagnosis: Severe ADHD, ODD, anxiety, mood disorder, psychosocial stress
• Treatment: High dose stimulant therapy, intermittent SSRI compliance, Care management, social work, psychotherapy
• Outcome: Slow and intermittent improvement with improved compliance, 11 year follow up at 17 years, doing well at Farm school, plans on college in Engineering
Riley

- 17 year old male
- 2+ years depression and anhedonia
- Presentation: Persistently low mood, decreasing school performance, social withdrawal
- MHI process: PCP evaluation/MHI evaluation PHQ score 13
- Diagnosis: Depression
- Treatment: SSRI, psychotherapy
- Outcome: Persistent symptoms, lack of clinical improvement at 6mos, max dose SSRI, changed SSRI lack of improvement
- Psychiatric Consultation: Transition to Bupropion, persistent lack of improvement
- Joint consultation with psychiatry, outcome uncertain, management ongoing
Thank You

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Pediatrician at Memorial Clinic