Integrated Behavioral Health for Complex Patients: Roadmap, Tools and Technology

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Elise Pomerance, M.D., M.P.H.
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Faculty Disclosure

Dr. Ring is a Speaker for Merck Pharmaceuticals on doctor-patient communication and culturally responsive care.
Shoulders by Naomi Shihab Nye

A man crosses the street in the rain,
Stepping gently, looking two times north and south,
Because his son is asleep on his shoulder.
No car must splash him.
No car drive too near to his shadow.
This man carries the world’s most sensitive cargo but he’s not marked.
Nowhere does his jacket say FRAGILE, HANDLE WITH CARE.
His ear fills up with breathing.
He hears the hum of a boy’s dream
deep inside him.
We’re not going to be able to live in this world if were not willing to do what he’s doing with one another.
The road will only be wide. The rain will never stop falling.
Objectives - Participants will:

- Articulate core competencies for BH integration for complex patients
- Receive overview of initial project outcomes
- Understand the successes and challenges of the BHICCI
How does one build an integrated complex care initiative?

• Who do you want on your team?
• What skills do you want them to possess?
• How will you manage data to know if patients are improving?
Inland Empire Challenges

• 55% Minorities
• Limited Education
• Unemployment more than doubled since 2007 > 14.7%
  (12% US, 10% CA)
• Poverty 12.7%
IE Health Inequities - Mortality
1 Heart Disease
2 Cancer
3 Lung Disease
4 Stroke
5 Unintentional Injuries
7 Diabetes (5x for Latinos/as)
Our Health Care System

- Few providers
- Isolated Partners
- Disconnected BH
- Fragmented Care
- Poor Health Outcomes
- Lack of IT Infrastructure
- Very High Costs
Project Goals are consistent with National Goals:
Address social factors in payment and performance through incentives and support for health equity efforts
• Office of the Assistant Secretary for Planning and Evaluation in DHHS
• National Academy of Medicine
• National Quality Forum
How many of these people with behavioral health concerns will see a mental health provider?

Wang P, et al., Twelve-Month Use of Mental Health Services in the United States, Arch Gen Psychiatry, 62, June 2005
A $30,000,000 Investment
BHICCI Key Commitments

• Improve patient and team experience
• Improve care coordination and integration of primary, specialty, addiction, and mental health care across and between healthcare/treatment settings
• Improve complex care management of individuals with chronic conditions
BHICCI Key Commitments

• Improve population health management by using data analytics

• Improve access

• Reduce overall health care costs in the Inland Empire safety net
BHICCI Core Elements

- 24 month pilot
- 30 safety net sites: Primary Care, BH, Hosp. Ambulatory Clinics
- Health Homes
- Whole Person Care
Target Population
• 2+ chronic conditions (PH/BH)
• Benefit from care management
• High cost
• IEHP members
BHICCI Roadmap
Engage Leaders
Engage Teams
Partner with Patients
Data and Measurement
Adopt a QI Method
Define/Identify Population
Build Multidisciplinary, Complex Care Teams/SCR
Integrate Behavioral Health Services with Complex Care
Sustain Change
TRIAD TEAMS and Coaches
Relationship-Centered Care

“I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”

-Maya Angelou
# PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
<th>Very Slight</th>
<th>Slight</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Trouble falling or staying asleep, or sleeping too much</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Feeling tired or having little energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Poor appetite or overeating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Feeling bad about yourself—or that you are a failure or have let yourself or your family down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Trouble concentrating on things, such as reading the newspaper or watching television</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Moving or speaking so slowly that other people could have noticed, or the opposite—being so fidgety or restless that you have been moving around a lot more than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Thoughts that you would be better off dead, or of hurting yourself in some way</td>
<td>✔</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL:** 15

---

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? 

- Not difficult at all
- Somewhat difficult ✔
- Very difficult
- Extremely difficult

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Registries to Track Progress

<table>
<thead>
<tr>
<th>Patient ID</th>
<th>Case/Study</th>
<th>Program</th>
<th>Treated</th>
<th>Logpoint</th>
<th>Search Patient</th>
<th>Next Appt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>340027</td>
<td>U</td>
<td>LT</td>
<td>22</td>
<td>10</td>
<td>21/11/2011</td>
<td>9/16/2011</td>
</tr>
</tbody>
</table>

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AIMS Center: http://aims.uw.edu
<table>
<thead>
<tr>
<th>BHICCI Clinic Site Types</th>
<th># of Sites</th>
<th># of Members Enrolled (9/1/17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Clinics</td>
<td>19</td>
<td>2,859</td>
</tr>
<tr>
<td>Behavioral Health Clinics</td>
<td>3</td>
<td>431</td>
</tr>
<tr>
<td>Coordination-Focused Clinics</td>
<td>3</td>
<td>228</td>
</tr>
<tr>
<td>Pediatric Clinics</td>
<td>2</td>
<td>234</td>
</tr>
<tr>
<td>Specialty Pain Clinics</td>
<td>3</td>
<td>624</td>
</tr>
<tr>
<td>BHI Clinic (no complex care)</td>
<td>1</td>
<td>148</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31</strong></td>
<td><strong>4,524</strong></td>
</tr>
</tbody>
</table>

Note: The current average length of enrollment for Members in BHICCI is 3-4 months.
Workforce Education Sessions
Core Competencies

- Outreach/engagement
- Health Literacy
- Medication Adherence
- Supporting Self-Management
- Shared Care Planning
- Registry Management
- Transitions of Care
- Cross-System Leadership
Team and Patient Experience
EXPerience OBJECTIVES

Consistency
Every Voice Matters

Culture
Learning & Contribution

Connection
Whole Human Outcomes
Experience Drives Outcomes

“A focus on experience at the broadest sense leads to the achievement of the four outcomes leaders aspire to in varying combinations in healthcare organizations around the world: clinical outcomes, financial outcomes, consumer loyalty, and community reputation.” - Jason A. Wolf, PhD, CPXP, The Beryl Institute

“The data presented display that patient experience is positively associated with clinical effectiveness and patient safety, and support the case for the inclusion of patient experience as one of the central pillars of quality in healthcare.” - Doyle C., Lennox L, Bell D. BMJ Open
PATIENT Participation & Sites Active

<table>
<thead>
<tr>
<th>Month</th>
<th>Completes</th>
<th>Sites Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>734</td>
<td>31</td>
</tr>
<tr>
<td>June</td>
<td>578</td>
<td>26</td>
</tr>
<tr>
<td>May</td>
<td>515</td>
<td>21</td>
</tr>
<tr>
<td>April</td>
<td>621</td>
<td>21</td>
</tr>
<tr>
<td>March</td>
<td>265</td>
<td>15</td>
</tr>
</tbody>
</table>
Patient Experience – Mean & Net Promoter Score

**Mean (avg of these questions) – 5 pts**
1. Care team listens to me and understand
2. I trust my care team
3. Care team always involves me in the decisions
4. My overall health is better

**Net Promoter Score (NPS) – 10 pts**
1. How likely is it that you would recommend this care center
Team Experience – Mean & Net Promoter Score

Mean (avg of these questions) – 5 pts
1. I feel valued at work
2. I have everything I need to provide the best care
3. I trust my team to support me
4. My life is better
5. I plan to be here three years (quarterly)

Net Promoter Score (NPS) – 10 pts*
1. How likely is it that you would recommend

*NPS performed quarterly for Team Members
What are some early learnings from the data?
On average, patients with elevated Behavioral Health scores at Baseline had lower scores, on average, at their last follow-up assessment.

Patients with elevated HbA1c and blood pressure scores at Baseline experienced some improvements in scores, on average.

The majority of BHICCI patients are enrolled at Med HCOs and are fairly new to BHICCI (less than 6 months).

These results represent a small percentage of all BHICCI patients.
More recent data review: what can we say now?
Baseline PHQ-9 Threshold Scores

- **MedHCO (n=2255)**: 41% below 10, 59% >=10
- **BehHCO (n=389)**: 55% below 10, 45% >=10
- **CCHCO (n=269)**: 62% below 10, 38% >=10
- **SpecPainC (n=1022)**: 31% below 10, 69% >=10
- **BHI (n=104)**: 41% below 10, 59% >=10
- **Overall (n=3938)**: 42% below 10, 58% >=10

Data through 8-2-17
### Behavioral Health Outcomes – PHQ-9

**Change in Average PHQ-9 Scores (Baseline Score >= 10)**

<table>
<thead>
<tr>
<th>Depression Level</th>
<th>Average Scores at First Assessment</th>
<th>Average Scores at Last Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MedHCO (n=242) *</td>
<td>16.9</td>
<td>12.8</td>
</tr>
<tr>
<td>BehHCO (n=44) *</td>
<td>15.3</td>
<td>9.9</td>
</tr>
<tr>
<td>CCHCO (n=91) *</td>
<td>14.9</td>
<td>10.1</td>
</tr>
<tr>
<td>SpecPainC (n=462) *</td>
<td>17.7</td>
<td>12.7</td>
</tr>
<tr>
<td>BHI (n=16)</td>
<td>17.6</td>
<td>15.7</td>
</tr>
<tr>
<td>Overall (n=828) *</td>
<td>17.1</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Note: * indicates statistical significance

n represents BHICCI patients enrolled for a minimum of 1 month
Baseline HbA1c Threshold Scores

<table>
<thead>
<tr>
<th></th>
<th>Percentage of HbA1c scores below 7.0%</th>
<th>Percentage of HbA1c scores &gt;=7.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MedHCO</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>BehHCO</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>CCHCO</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td>SpecPainC</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>BHI</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>PedHCC</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>62%</td>
<td></td>
</tr>
</tbody>
</table>

Data through 8-2-17
Change in HbA1c Average Scores (Baseline Score >= 7.0%)

<table>
<thead>
<tr>
<th></th>
<th>average scores at first assessment</th>
<th>average scores at last assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MedHCO (n=281) *</td>
<td>9.6</td>
<td>8.9</td>
</tr>
<tr>
<td>CCHCO (n=9)</td>
<td>8.1</td>
<td>7.9</td>
</tr>
<tr>
<td>SpecPainC (n=15)</td>
<td>10.1</td>
<td>9.6</td>
</tr>
<tr>
<td>BHI (n=22)</td>
<td>9.2</td>
<td>9.6</td>
</tr>
<tr>
<td>Overall (n=315) *</td>
<td>9.5</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Data through 8-2-17

Mild depression

Average scores at first assessment:
- MedHCO (n=281) *: 9.6
- CCHCO (n=9): 8.1
- SpecPainC (n=15): 10.1
- BHI (n=22): 9.2
- Overall (n=315) *: 9.5

Average scores at last assessment:
- MedHCO (n=281) *: 8.9
- CCHCO (n=9): 7.9
- SpecPainC (n=15): 9.6
- BHI (n=22): 9.6
- Overall (n=315) *: 8.9
Physical Health Outcomes – Systolic Blood Pressure

Change in Average SBP Scores (Baseline Score >= 140)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Prehypertension</th>
<th>Normal</th>
<th>Stage 1 Hypertension</th>
<th>Stage 2 Hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>average scores at first assessment</strong></td>
<td><strong>average scores at last assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MedHCO (n=171) *</td>
<td>152.1</td>
<td>139.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BehHCO (n=18) *</td>
<td>151.2</td>
<td>132.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCHCO (n=19) *</td>
<td>145.7</td>
<td>120.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SpecPainC (n=149) *</td>
<td>153.1</td>
<td>132.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHI (n=18)</td>
<td>147.3</td>
<td>138.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Overall (n=364) ***</td>
<td><strong>151.9</strong></td>
<td><strong>135.3</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates statistical significance
n represents BHICCI patients enrolled for a minimum of 1 month
Physical Health Outcomes – Diabetes (HbA1c)

Change in Average HbA1c Scores (Baseline Score >= 7.0 %) (n=132)*

Overall Average Score at First Assessment: 9.5
Overall Average Score at Last Assessment: 8.9

*Note: The current average length of enrollment for Members in BHICCI is 3-4 months
Physical Health Outcomes – Hypertension (SBP)

Change in Average Systolic Blood Pressure (SBP) Scores (Baseline Score >= 140) (n=364)*

Average Score at First Assessment 151.9

Average Score of Last Assessment 135.3

*Note: The current average length of enrollment for Members in BHICCI is 3-4 months
Behavioral Health Outcomes – Depression (PHQ-9*)

Change in Average PHQ-9 Scores (Baseline Score >= 10) (n=828)**

Average Score at First Assessment

- Moderately Severe Depression: 17.1
- Moderate Depression: 15

Average Score of Last Assessment

- 12.4

*Patient Health Questionnaire (PHQ-9) – Depression Screening

**Note: The current average length of enrollment for Members in BHICCI is 3-4 months
BHICCI Teams PMPM Claims and Pharmacy Cost Analysis
For the Period January 2015 - April 2017
Per Member Per Month (PMPM) Costs by Service Area (2,213 Members)

<table>
<thead>
<tr>
<th>Month of BHICCI Enrollment</th>
<th>Inpatient</th>
<th>ER</th>
<th>RX</th>
<th>Office Visit</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before BHICCI Average</td>
<td>$372</td>
<td>$55</td>
<td>$302</td>
<td>$100</td>
<td>$173</td>
<td>$1,046</td>
</tr>
<tr>
<td>Average During 1st 6+ Months</td>
<td>$228</td>
<td>$51</td>
<td>$349</td>
<td>$111</td>
<td>$217</td>
<td>$997</td>
</tr>
<tr>
<td>PMPM Increase (Decrease)</td>
<td>($144)</td>
<td>($4)</td>
<td>$48</td>
<td>$12</td>
<td>$44</td>
<td>($49)</td>
</tr>
<tr>
<td>% Increase (Decrease)</td>
<td>-39%</td>
<td>-8%</td>
<td>16%</td>
<td>12%</td>
<td>26%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

Preliminary Cost Data are Trending in the Right Direction
### Preliminary Cost Data (UCSD)

BHICCI Teams PMPM Claims and Pharmacy Cost Analysis
For the Period January 2015 - April 2017
Per Member Per Month (PMPM) Costs by Service Area (2,213 Members)

<table>
<thead>
<tr>
<th>Month of BHICCI Enrollment</th>
<th>Inpatient</th>
<th>ER</th>
<th>RX</th>
<th>Office Visit</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-6 or earlier</td>
<td>$333</td>
<td>$46</td>
<td>$287</td>
<td>$78</td>
<td>$169</td>
<td>$973</td>
</tr>
<tr>
<td>-5</td>
<td>$309</td>
<td>$51</td>
<td>$324</td>
<td>$84</td>
<td>$176</td>
<td>$1,001</td>
</tr>
<tr>
<td>-4</td>
<td>$474</td>
<td>$54</td>
<td>$278</td>
<td>$94</td>
<td>$150</td>
<td>$1,056</td>
</tr>
<tr>
<td>-3</td>
<td>$432</td>
<td>$53</td>
<td>$299</td>
<td>$92</td>
<td>$164</td>
<td>$1,059</td>
</tr>
<tr>
<td>-2</td>
<td>$391</td>
<td>$64</td>
<td>$294</td>
<td>$112</td>
<td>$179</td>
<td>$1,049</td>
</tr>
<tr>
<td>-1</td>
<td>$294</td>
<td>$61</td>
<td>$329</td>
<td>$137</td>
<td>$198</td>
<td>$1,064</td>
</tr>
<tr>
<td>0</td>
<td>$209</td>
<td>$57</td>
<td>$356</td>
<td>$169</td>
<td>$220</td>
<td>$1,031</td>
</tr>
<tr>
<td>1</td>
<td>$261</td>
<td>$55</td>
<td>$361</td>
<td>$123</td>
<td>$218</td>
<td>$1,049</td>
</tr>
<tr>
<td>2</td>
<td>$214</td>
<td>$48</td>
<td>$295</td>
<td>$92</td>
<td>$197</td>
<td>$901</td>
</tr>
<tr>
<td>3</td>
<td>$273</td>
<td>$58</td>
<td>$362</td>
<td>$87</td>
<td>$216</td>
<td>$1,034</td>
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<tr>
<td>4</td>
<td>$180</td>
<td>$43</td>
<td>$347</td>
<td>$98</td>
<td>$234</td>
<td>$946</td>
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<tr>
<td>5</td>
<td>$235</td>
<td>$42</td>
<td>$419</td>
<td>$94</td>
<td>$208</td>
<td>$1,045</td>
</tr>
<tr>
<td>6 or later</td>
<td>$225</td>
<td>$51</td>
<td>$306</td>
<td>$115</td>
<td>$224</td>
<td>$971</td>
</tr>
</tbody>
</table>

### Preliminary Cost Data are Trending in the Right Direction

<table>
<thead>
<tr>
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<td>-8%</td>
<td>16%</td>
<td>12%</td>
<td>26%</td>
<td>-5%</td>
</tr>
</tbody>
</table>
BHICCI Case Rates

• Project Goal
  – Develop Case Rates for the BHICCI Teams that will kick in after the pilot ends in July 2018.
BHICCI Roadmap

Health Homes Program (HHP) – BHICCI is footprint for California 1115 waiver HHP -- starts January 2019

BHICCI Awarded Department of California Health Care Services Managed Care Quality Award – October, 2017
A man crosses the street in the rain,
Stepping gently, looking two times north and south,
Because his son is asleep on his shoulder.
No car must splash him.
No car drive to near to his shadow.
This man carries the world’s most sensitive cargo but he’s not marked.
Nowhere does his jacket say FRAGILE, HANDLE WITH CARE.
His ear fills up with breathing.
He hears the hum of a boy’s dream
deep inside him.
We’re not going to be able to live in this world if were not willing to do what he’s doing
with one another.

The road will only be wide. The rain will never stop falling.
Questions | Discussion

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jennifer@jenclancy.com